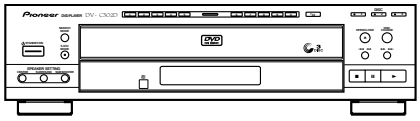
Service Manual



● DV-C302D

ORDER NO.
RRV2204

DVD PLAYER

DV-C302D
DV-K302CD

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	The voltage can be converted by the following method.	Regional restriction codes (Region No.)
	DV-C302D	DV-K302CD			
KU/CA	○	—	AC120V		1
RAMXQ	—	○	AC110-127/220-240V	Automatic select	6
RD/RA	—	○	AC110-127/220-240V	Automatic select	1
RL	—	○	AC110-127/220-240V	Automatic select	3
RL/RD	—	○	AC110-127/220-240V	Automatic select	4

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

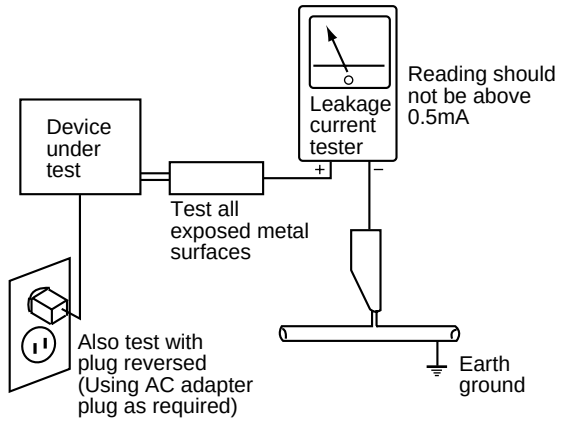
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
+
–
Device under test
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

IMPORTANT

THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.

LASER DIODE CHARACTERISTICS

FOR DVD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 655 nm
FOR CD : MAXIMUM OUTPUT POWER : 5mW
WAVELENGTH : 785 nm

Additional Laser Caution

1. Inside detection switch (S201 on the SMEB assy) and loading-status detection switch (S9503 on the MOTOR assy) are detected by the microprocessor (IC11 in the DVDM assy).
   • To permit the laser diode to oscillate, it is required to set the inside detection switch for the inside position (S201 : ON) and to set the loading-status detection switch for the clamp position (the center terminal of S9503 is shorted to +5V). The 655 nm laser diode for DVD oscillation will continue if pin 19 of IC1 is shorted to +5V (fault condition) in the DVDM assy.
   The 785 nm laser diode for CD oscillates if pin 20 of IC1 is shorted to +5V in the DVDM assy.
   In the test mode ∗ , the laser diode oscillates when microprocessor detects a PLAY signal, or when the PLAY key is pressed (S131 ON in the FLKY assy), with the above requirements satisfied.

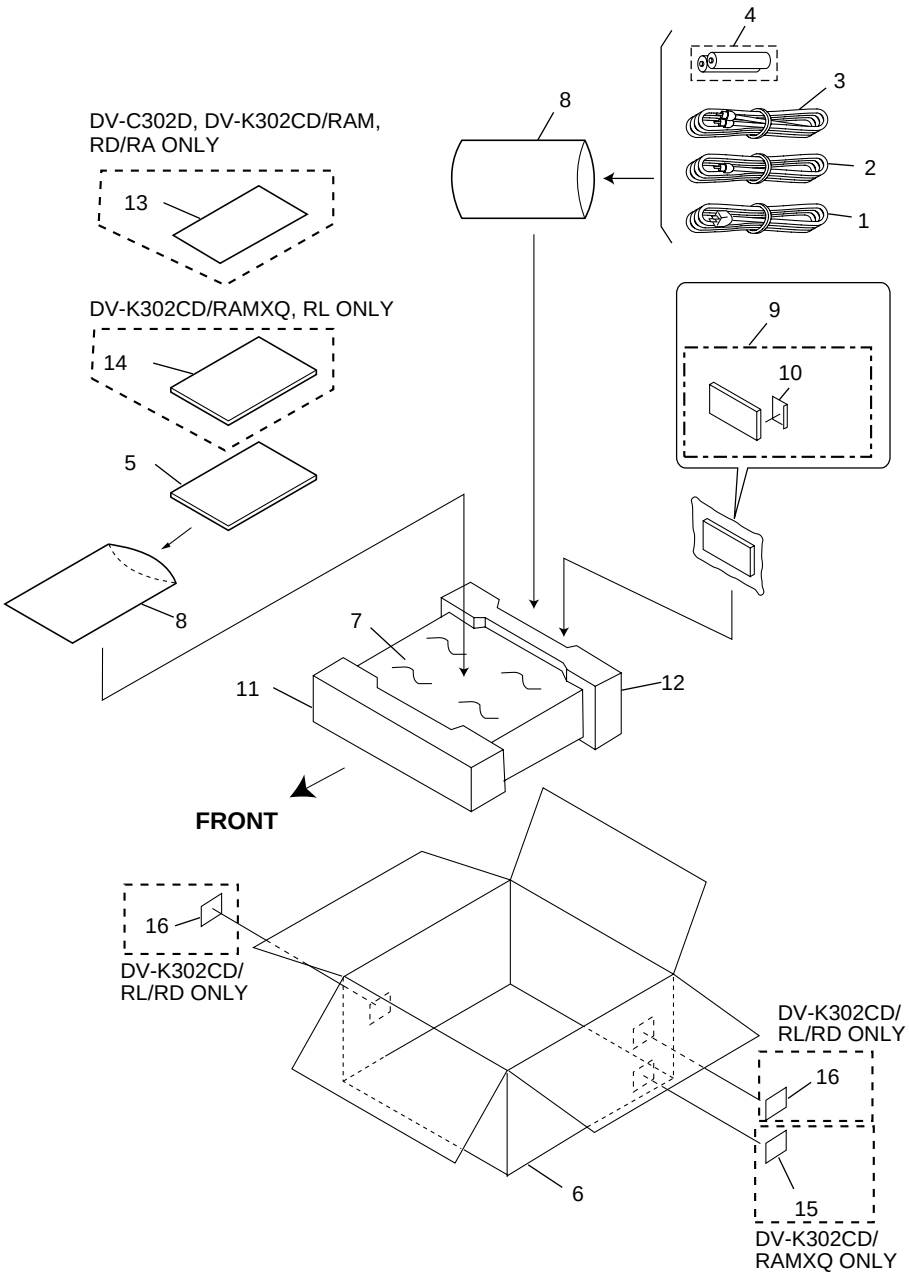
2. When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to the laser beam.

∗ : See page 55.

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*

2.1 PACKING



(1) PACKING PARTS LIST

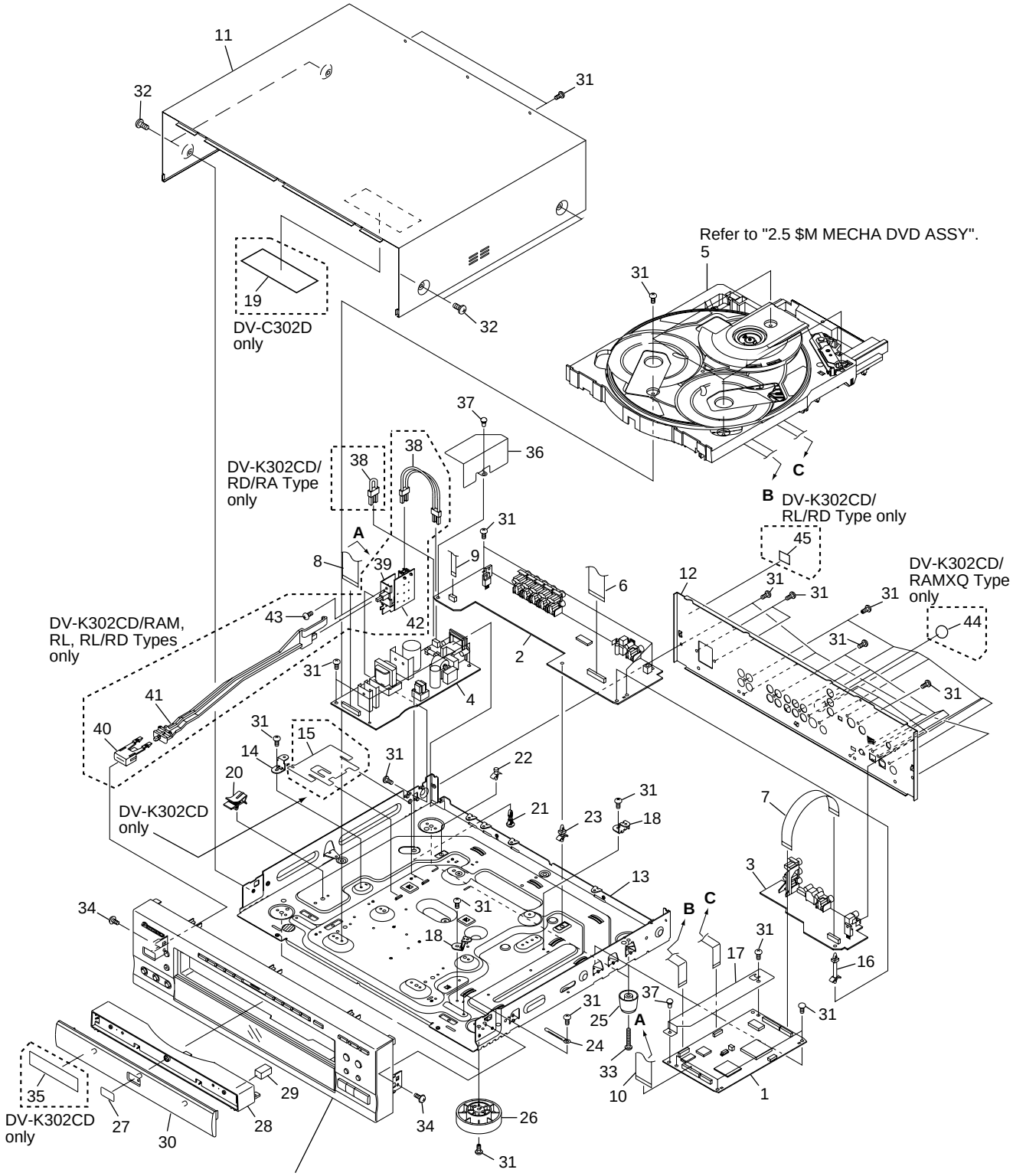
Mark	No.	Description	Part No.
⚠	1	Power Cord	See Contrast table (2)
	2	Video Cord (L = 1.5m)	See Contrast table (2)
	3	Audio Cord (L = 1.5m)	See Contrast table (2)
NSP	4	Dry Cell Battery (R6P, AA)	See Contrast table (2)
	5	Operating Instructions	See Contrast table (2)
	6	Packing Case	See Contrast table (2)
	7	Sheet	RHX1006
	8	Polyethylene Bag	VHL1051
	9	Remote Control Unit	See Contrast table (2)
	10	Battery Cover	AZA7204
	11	Pad F	VHA1240
	12	Pad R	VHA1241
NSP	13	Warranty Card	See Contrast table (2)
	14	Operating Instructions (Chinese)	See Contrast table (2)
	15	Label	See Contrast table (2)
	16	Region Label P4	See Contrast table (2)

(2) CONTRAST TABLE

DV-C302D/KU/CA, DV-K302CD/RAMXQ, RD/RA, RL and RL/RD are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.					Remarks
			DV-C302D	DV-K302CD				
			KU/CA	RAMXQ	RD/RA	RL	RL/RD	
⚠	1	Power Cord	ADG7021	ADG7018	ADG7003	ADG1127	ADG1127	
	2	Video Cord (L=1.5m)	VDE1034	VDE1055	VDE1034	VDE1034	VDE1034	
	3	Audio Cord (L=1.5m)	VDE1033	VDE1054	VDE1033	VDE1033	VDE1033	
NSP	4	Dry Cell Battery (R6P, AA)	VEM-013	VEM1010	VEM-013	VEM-013	VEM-013	
	5	Operating Instructions (English/French)	VRB1234	Not used	Not used	Not used	Not used	
	5	Operating Instructions (English)	Not used	VRB1233	VRB1233	VRB1233	VRB1233	
	6	Packing case	VHG1820	VHG1845	VHG1819	VHG1846	VHG1846	
	9	Remote Control Unit(CU-DV051)	VXX2647	Not used	Not used	Not used	Not used	
	9	Remote Control Unit(CU-DV052)	Not used	VXX2646	VXX2646	VXX2646	VXX2646	
NSP	13	Warranty Card	ARY7023	ARY7028	ARY7025	Not used	Not used	
	14	Operating Instructions (Chinese)	Not used	VRC1100	Not used	VRC1101	Not used	
	15	Label	Not used	VRW1814	Not used	Not used	Not used	
	16	Region Label P4	Not used	Not used	Not used	Not used	VRW1705	

2.2 EXTERIOR SECTION


Refer to "2.5 $M MECHA DVD ASSY".
DV-C302D only
DV-K302CD/ RD/RA Type only
DV-K302CD/ RL/RD Type only
DV-K302CD/ RAMXQ Type only
DV-K302CD/RAM, RL, RL/RD Types only
DV-K302CD only
DV-K302CD only
Refer to "2.3 and 2.4 FRONT PANEL SECTION".

(1) EXTERIOR SECTION PARTS LIST

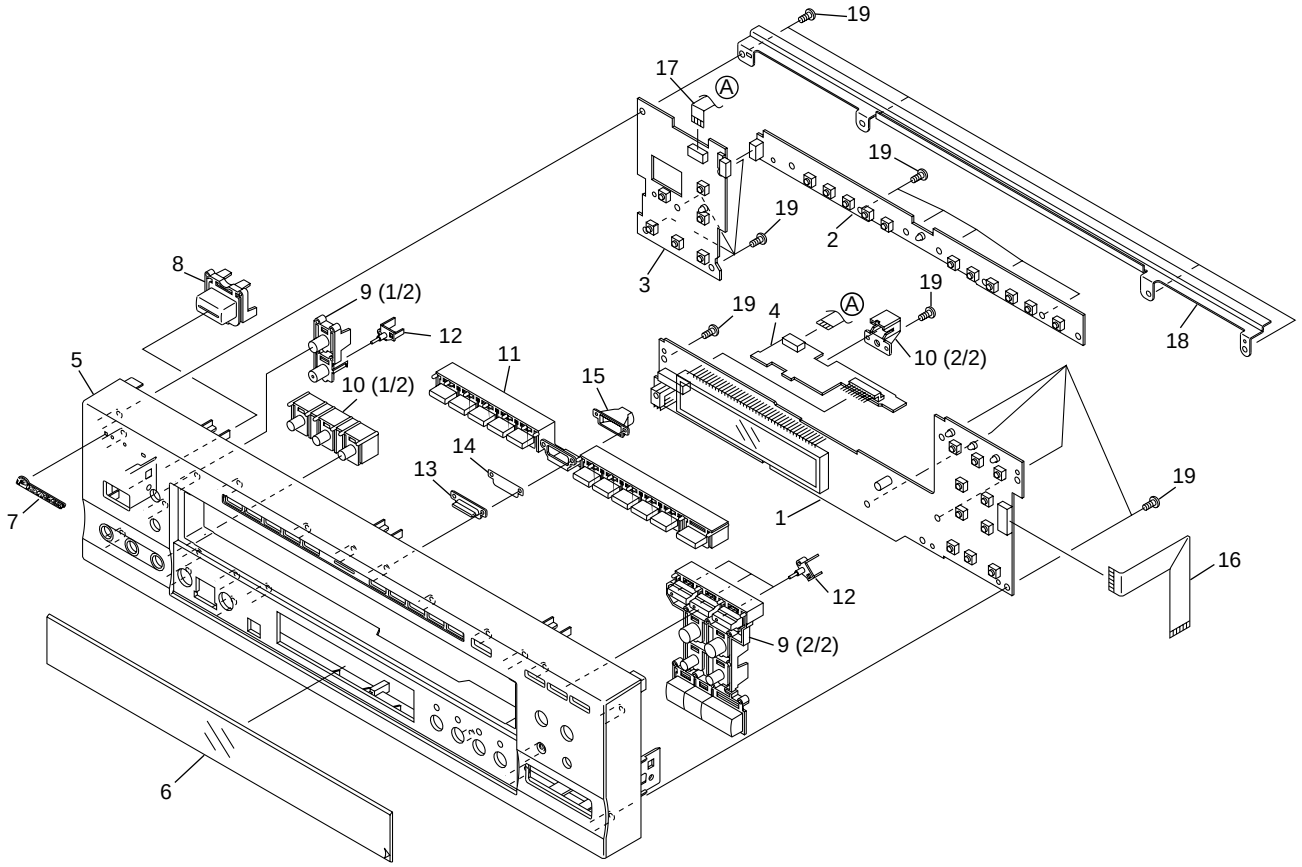
Mark	No.	Description	Part No.
	1	DVDM Assy	See Contrast table (2)
	2	AJKB Assy	See Contrast table (2)
	3	VJKB Assy	See Contrast table (2)
⚠	4	POWER SUPPLY Assy	See Contrast table (2)
NSP	5	$M MECHA DVD Assy	VWT1163
	6	Flexible Cable (26P) (DVDM CN50 ↔ AJKB CN101)	VDA1695
	7	Flexible Cable (16P) (DVDM CN40 ↔ VJKB CN501)	VDA1736
	8	Flexible Cable (26P) (DVDM CN2 ↔ POWER SUPPLY CN201)	VDA1705
	9	Flexible Cable (5P) (AJKB CN102 ↔ MICB CN402)	See Contrast table (2)
	10	Flexible Cable (15P) (DVDM CN10 ↔ FLKY CN101)	VDA1738
	11	Bonnet S	See Contrast table (2)
	12	Rear Panel	See Contrast table (2)
NSP	13	Chassis	See Contrast table (2)
NSP	14	PCB Base	RNE1221
	15	FFC Binder	See Contrast table (2)
NSP	16	PCB Support	REC1248
	17	FFC Holder	VEC2075
NSP	18	PCB Holder	VNE2209
	19	65 Label	See Contrast table (2)
	20	Flat Cable Clip	VEC2018
NSP	21	PCB Holder	PNW2029
NSP	22	Card Spacer	DEC1770
NSP	23	PCB Holder	PNW2100
	24	Cord Clamper	RNH-184
	25	Insulator Assy	VXA1638
	26	Insulator Assy	VXA2356
	27	DVD Plate	VAM1089
	28	Tray Panel Base	VNK4382
	29	Tray Panel Cushion	VEB1308
	30	Tray Panel	See Contrast table (2)
	31	Screw	BBZ30P080FMC
	32	Screw	See Contrast table (2)
	33	Screw	BBZ30P180FMC
	34	Screw	IBZ30P080FMC
NSP	35	Getter	See Contrast table (2)
	36	IC Guard	VEC2098
	37	Nyron Rivet	VEC2040
NSP	38	Housing Assy	See Contrast table (2)
NSP	39	Power Holder	See Contrast table (2)
	40	Power Button	See Contrast table (2)
	41	PW Joint	See Contrast table (2)
NSP	42	MSWB Assy	See Contrast table (2)
	43	Screw	See Contrast table (2)
	44	Label	See Contrast table (2)
	45	Region Label R4	See Contrast table (2)

(2) CONTRAST TABLE

DV-C302D/KU/CA, DV-K302CD/RAMXQ, RD/RA, RL and RL/RD are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.					Remarks
			DV-C302D	DV-K302CD				
			KU/CA	RAMXQ	RD/RA	RL	RL/RD	
	1	DVDM Assy	VWS1390	VWS1391	VWS1391	VWS1391	VWS1391	
	2	AJKB Assy	VWV1703	VWV1673	VWV1673	VWV1673	VWV1673	
	3	VJKB Assy	VWV1710	VWV1674	VWV1709	VWV1674	VWV1674	
⚠	4	POWER SUPPLY Assy	VWR1315	VWR1313	VWR1313	VWR1313	VWR1313	
	9	Flexible Cable (5P) (AJKB CN102 – MICB CN402)	Not used	VDA1737	VDA1737	VDA1737	VDA1737	
	11	Bonnet S	VXX2672	VXX2617	VXX2617	VXX2617	VXX2617	
	12	Rear Panel	VNA2104	VNA2110	VNA2103	VNA2128	VNA2128	
NSP	13	Chassis	VNA2102	VNA2146	VNA2102	VNA2102	VNA2102	
	15	FFC Binder	Not used	VEC2020	VEC2020	VEC2020	VEC2020	
	19	65 Label	ARW7050	Not used	Not used	Not used	Not used	
	30	Tray Panel	VNK4505	VNK4499	VNK4499	VNK4499	VNK4499	
	32	Screw	BCZ40P060FZK	BCZ40P060FNI	BCZ40P060FNI	BCZ40P060FNI	BCZ40P060FNI	
NSP	35	Getter	Not used	VRW1787	VRW1787	VRW1787	VRW1787	
NSP	38	Housing Assy (POWER SUPPLY CN102 short-circuit)	Not used	Not used	VKP2189	Not used	Not used	
NSP	38	Housing Assy (POWER SUPPLY CN102 – MSWB CN10)	Not used	VKP2194	Not used	VKP2194	VKP2194	
NSP	39	Power Holder	Not used	VNE2123	Not used	VNE2123	VNE2123	
	40	Power Button	Not used	VNK4159	Not used	VNK4159	VNK4159	
	41	PW Joint	Not used	VNK4364	Not used	VNK4364	VNK4364	
NSP	42	MSWB Assy	Not used	VWG2074	Not used	VWG2074	VWG2074	
	43	Screw	Not used	PMB30P080FZK	Not used	PMB30P080FZK	PMB30P080FZK	
	44	Label	Not used	VRW1739	Not used	Not used	Not used	
	45	Region Label R4	Not used	Not used	Not used	Not used	VRW1704	

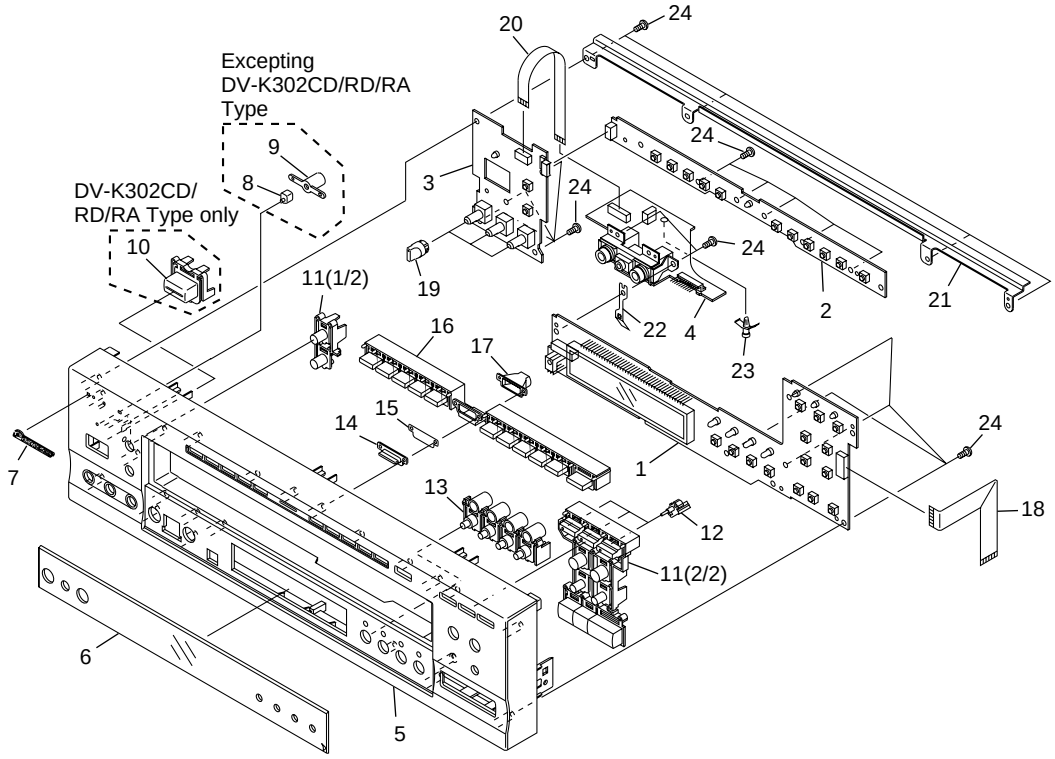
2.3 FRONT PANEL SECTION for DV-C302D



● FRONT PANEL SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	FLKY Assy	VWG2066
NSP	2	KYLB Assy	VWG2068
NSP	3	PWSB Assy	VWG2071
	4	CNNB Assy	VWG2072
	5	Front Panel	VNK4504
	6	FL Lens	VAH1320
	7	Name Plate	PAM1776
	8	PW Button	VNK4101
	9	Main Key	VNK4507
	10	3 Key	VNK4508
	11	11 Key	VNK4506
	12	LED Lens	VNK4503
	13	Illumination Lens	VNK4264
	14	Illumination Filter	VEC1983
	15	Illumination Holder	VNK4265
	16	Flexible cable (15P) (FLKY CN101 ↔ DVDM CN10)	VDA1738
	17	Flexible Cable (9P) (CNNB CN502 ↔ PWSB CN303)	VDA1735
	18	FP Angle	VNE2159
	19	Screw	BBZ30P080FMC

2.4 FRONT PANEL SECTION for DV-K302CD



(1) FRONT PANEL SECTION PARTS LIST

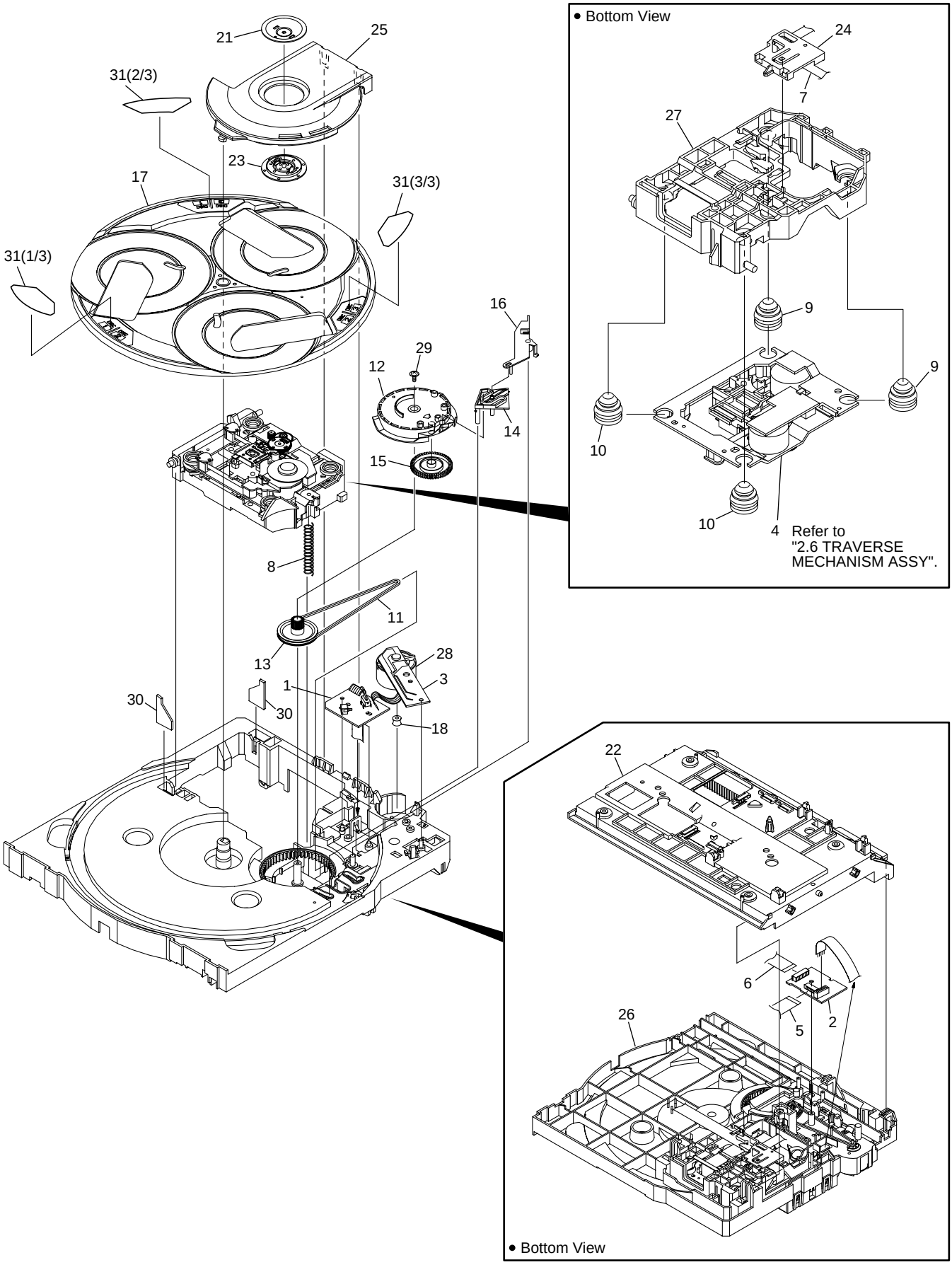
Mark	No.	Description	Part No.
	1	FLKY Assy	See Contrast table (2)
NSP	2	KYLB Assy	VWG2068
NSP	3	PWSB Assy	See Contrast table (2)
	4	MICB Assy	See Contrast table (2)
	5	Front Panel	See Contrast table (2)
	6	FL Lens	VAH1319
	7	Name Plate	PAM1779
	8	LED Lens	See Contrast table (2)
	9	Lens Holder	See Contrast table (2)
	10	PW Button	See Contrast table (2)
	11	Main Key	VNK4501
	12	LED Lens	VNK4503
	13	4 Key	VNK4502
	14	Illumination Lens	VNK4264
	15	Illumination Filter	VEC1983
	16	11 Key	VNK4500
	17	Illumination Holder	VNK4265
	18	Flexible Cable (15P) (FLKY CN101 ↔ DVDM CN10)	VDA1738
	19	Rotary Knob	RAC2201
	20	Flexible Cable (15P) (MICB CN403 ↔ PWSB CN301)	VDA1734
	21	FP Angle	VNE2159
	22	Earth Plate	VBK1093
	23	Card Spacer	DEC1772
	24	Screw	BBZ30P080FMC

(2) CONTRAST TABLE

DV-K302CD/RAMXQ, RD/RA, RL and RL/RD are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.				Remarks
			DV-K302CD				
			RAMXQ	RD/RA	RL	RL/RD	
	1	FLKY Assy	VWG2061	VWG2063	VWG2060	VWG2060	
NSP	3	PWSB Assy	VWG2070	VWG2069	VWG2070	VWG2070	
	4	MICB Assy	VWV1723	VWV1679	VWV1723	VWV1723	
	5	Front Panel	VNK4566	VNK4498	VNK4533	VNK4533	
	8	LED Lens	PNW2019	Not used	PNW2019	PNW2019	
	9	Lens Holder	VNK4266	Not used	VNK4266	VNK4266	
	10	PW Button	Not used	VNK4059	Not used	Not used	

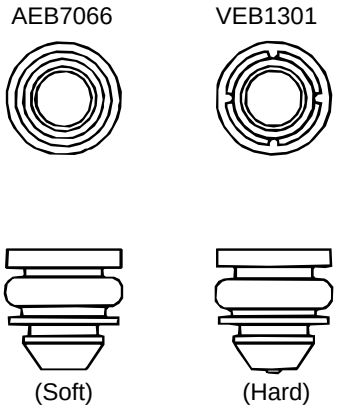
2.5 $M MECHA DVD ASSY



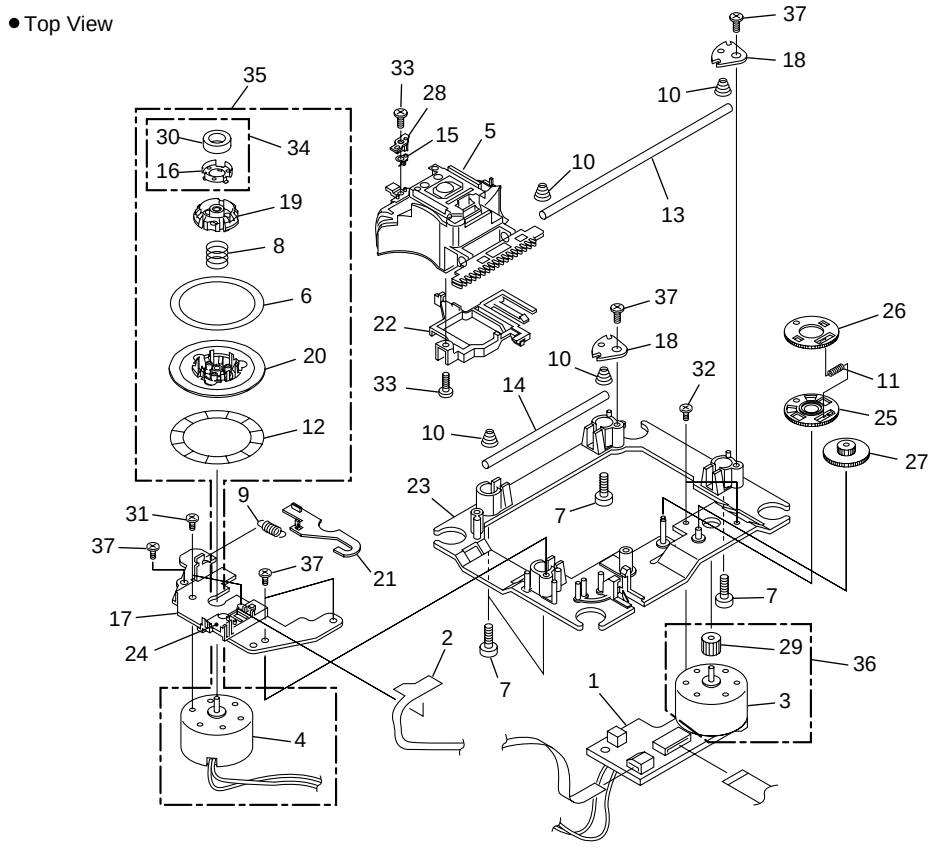
● $M MECHA DVD ASSY PARTS LIST

Mark	No.	Description	Part No.
NSP	1	SW Assy	VWG2002
NSP	2	TRADE Assy	VWG2003
NSP	3	MOTOR Assy	VWG2004
	4	TRAVERSE Mechanism Assy-S	VXX2653
	5	Flexible Cable (8P) (TRADE CN9001 ↔ SMEB CN202)	VDA1715
	6	Flexible Cable (13P) (TRADE CN9002 ↔ DVDM CN3)	VDA1716
	7	Flexible Cable (24P) (Pickup Assy ↔ DVDM CN4)	VDA1704
	8	Servo Spring	ABH7126
	9	Float Rubber C	VEB1301
	10	Float Rubber B	AEB7066
	11	Belt	AEB7072
	12	Main Cam	ANW7093
	13	Gear Pulley	ANW7094
	14	Lock Lever	ANW7095
	15	Planet Gear	ANW7096
	16	Actuator	ANW7097
	17	Rotary Tray	ANW7113
	18	Motor Pulley	PNW1634
	19	• • • • •	
	20	• • • • •	
	21	Clamper Plate	VNE2162
	22	Mecha Base	VNK4600
	23	Clamper	VNK1738
	24	FFC Holder	VNL1803
	25	Clamper Holder	VNL1804
	26	Loading Tray	XNW3002
	27	Servo Base	XNW3010
	28	Slider Motor (LOADING)	VXM1033
	29	Screw	IPZ30P080FMC
	30	Shaft Press Rubber	VEB1300
	31	Tray Number Label	VRW1759

Detail of Float Rubber (No.9, No.10)



2.6 TRAVERSE MECHANISM ASSY-S

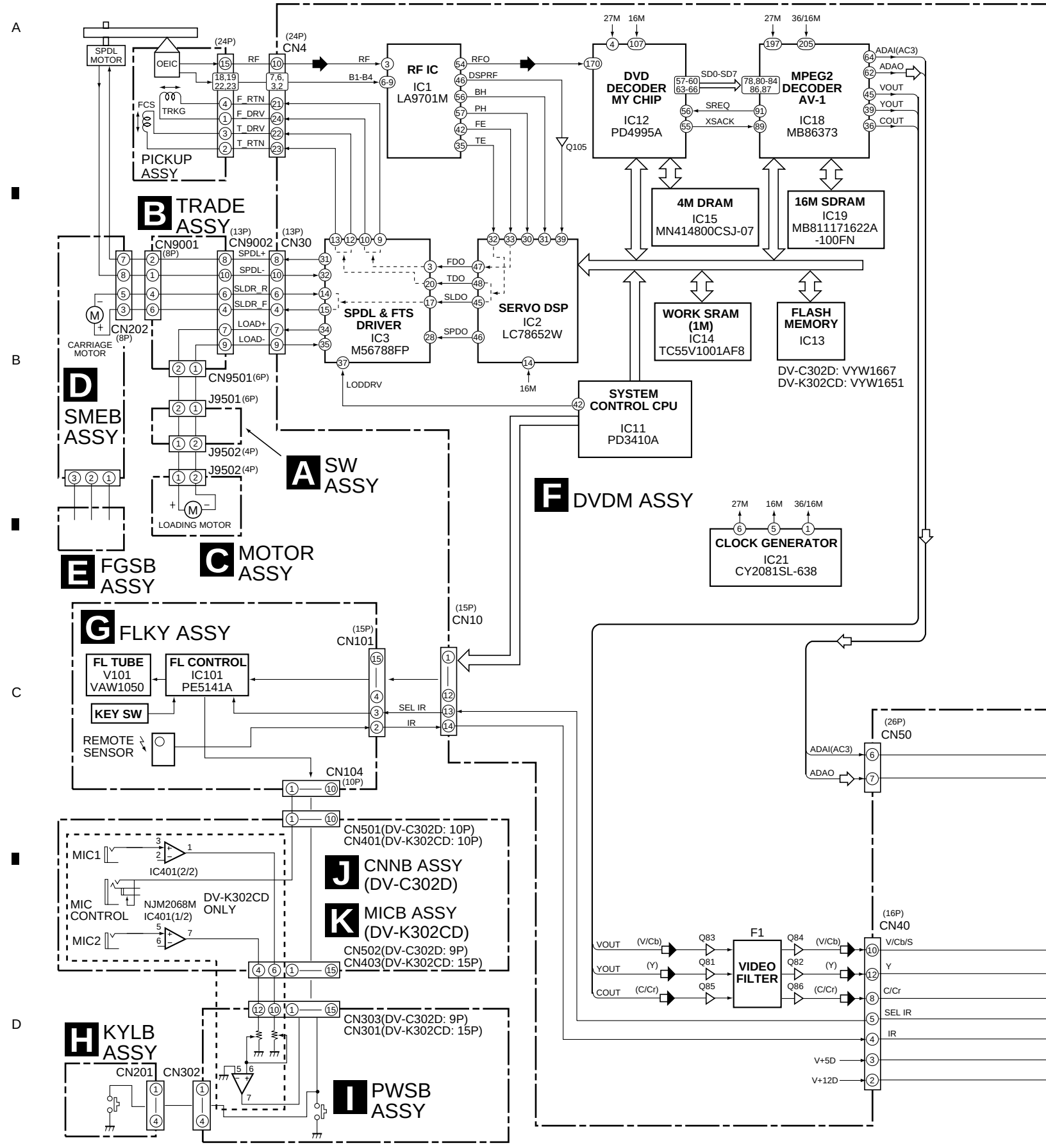


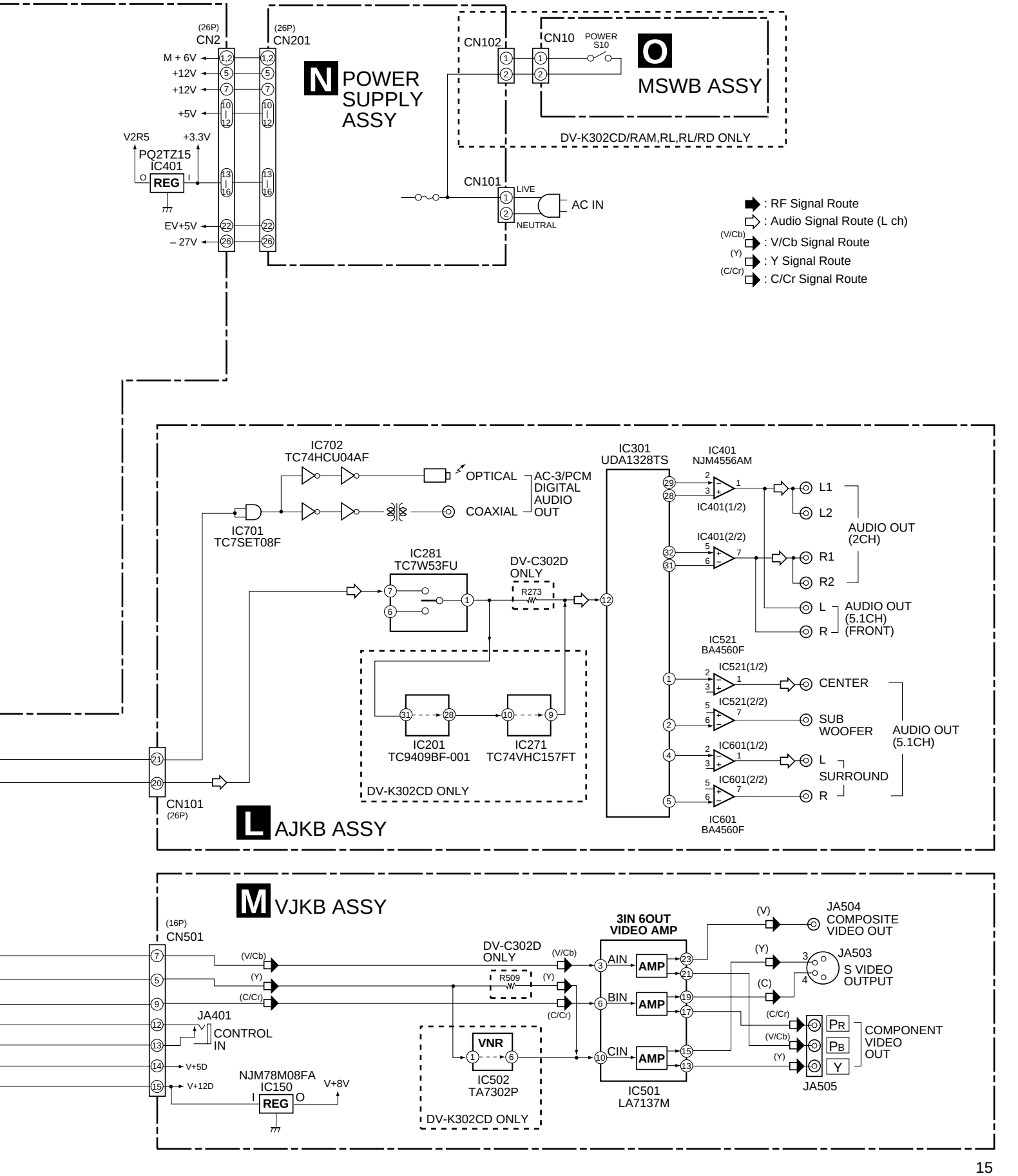
● TRAVERSE MECHANISM ASSY-S PARTS LIST

Mark	No.	Description	Part No.
NSP	1	SMEB Assy	VWG2048
NSP	2	FGSB Assy	VWG2009
NSP	3	Motor	VXM1079
NSP	4	Motor	VXM1078
NSP ⚠	5	Pickup Assy	VWY1055
	6	Table Sheet	DEC2040
	7	Screw	VBA1058
	8	Centering Spring	VBH1278
	9	Hook Spring	VBH1317
	10	Skew Spring	VBH1303
	11	Gear Spring	VBH1308
NSP	12	Reflected Sheet	VEC1959
	13	Guide Bar	VLL1504
	14	Sub-guide Bar	VLL1505
	15	Hold Spring	VNC1017
NSP	16	Magnet Holder	VNE2070
NSP	17	Motor Base	VNE2154
NSP	18	Cover	VNE2155
	19	Centering Ring	VNL1746
NSP	20	Disc Table	VNL1747
	21	Hook	VNL1770
	22	FFC Holder	VNL1802
	23	Mechanism Base	VNL1806
	24	FG Holder	VNL1807
	25	Gear A	VNL1808
	26	Gear B	VNL1809
	27	Gear C	VNL1810
	28	Slider	VNL1811
	29	Gear D	VNL1814
NSP	30	Magnet	VYM1024
	31	Screw	JFZ17P025FZK
	32	Screw	JGZ17P028FMC
	33	Screw	VBA1051
	34	Magnet Holder Assy	VXX2507
	35	Spindle Motor Assy	VXX2649
	36	Carriage Motor Assy	VXX2650
NSP	37	Screw	PBA1069

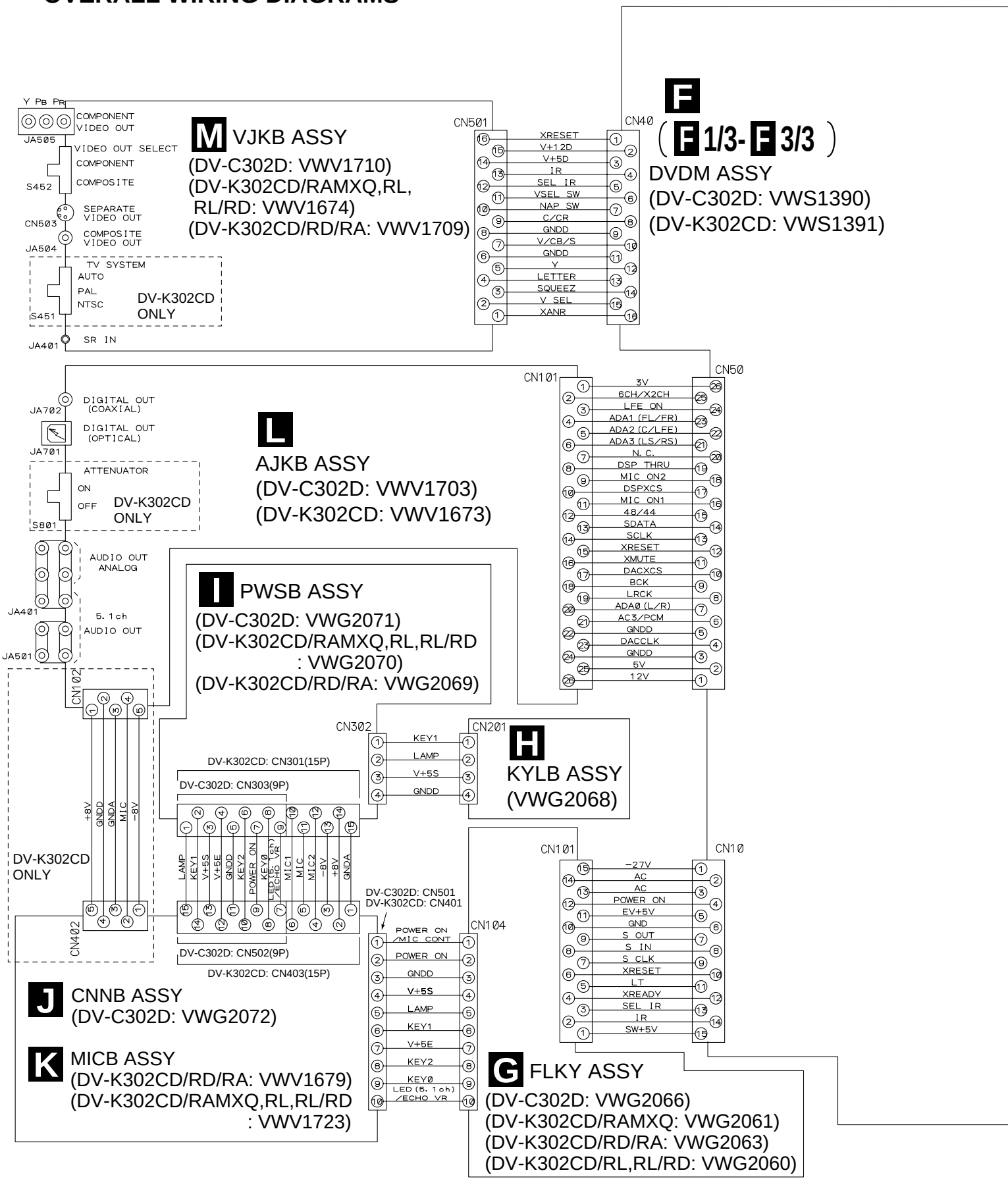
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

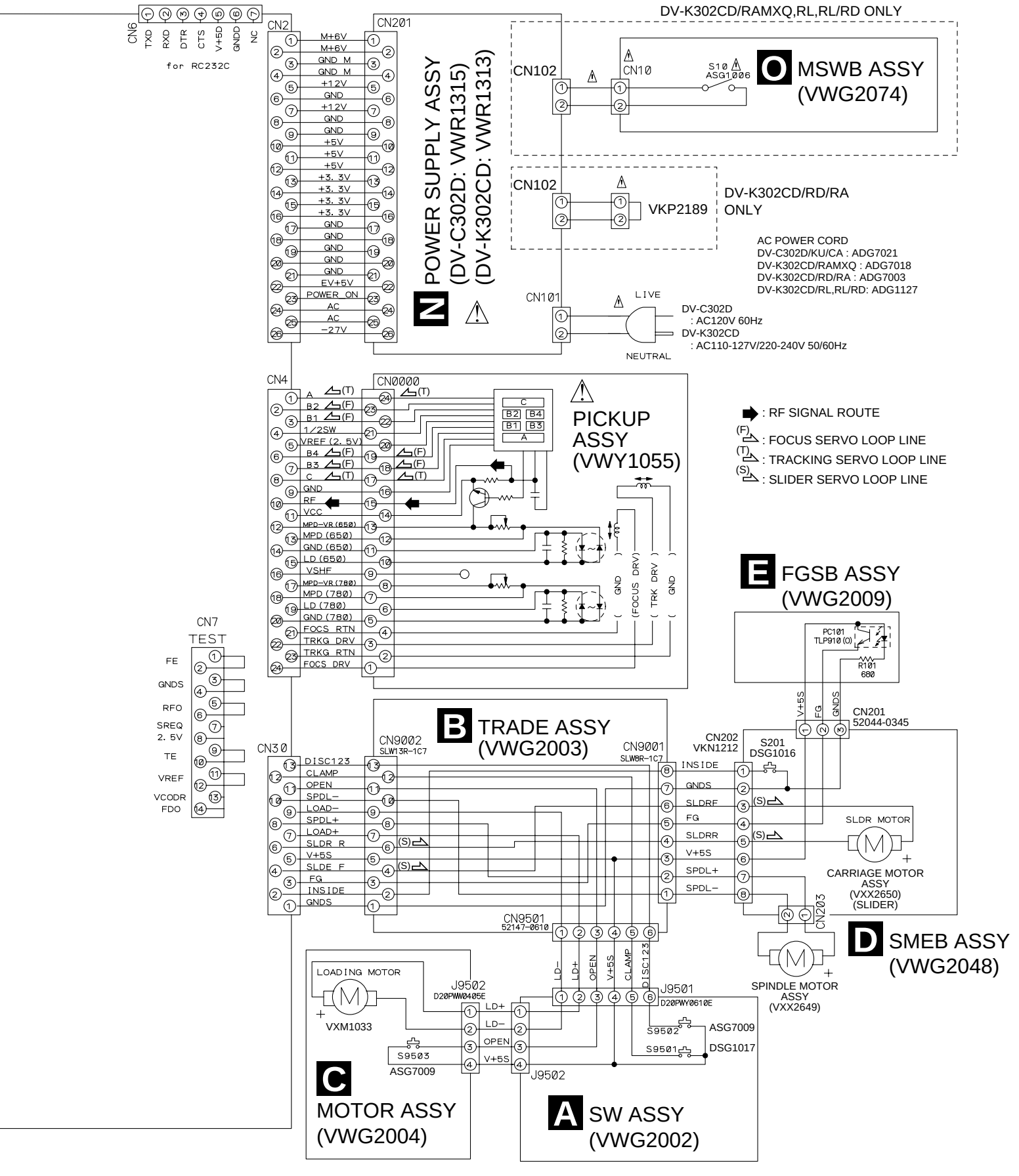



(26P)
CN2
(26P)
CN201
M + 6V
+12V
+12V
+5V
V2R5
+3.3V
PQ2TZ15
IC401
REG
EV+5V
– 27V
N POWER SUPPLY ASSY
CN102
CN10
POWER
S10
O MSWB ASSY
DV-K302CD/RAM,RL,RL/RD ONLY
CN101
LIVE
NEUTRAL
AC IN
: RF Signal Route
: Audio Signal Route (L ch)
(V/Cb) : V/Cb Signal Route
(Y) : Y Signal Route
(C/Cr) : C/Cr Signal Route
IC702
TC74HCU04AF
OPTICAL
COAXIAL
AC-3/PCM
DIGITAL
AUDIO
OUT
IC701
TC7SET08F
IC281
TC7W53FU
DV-C302D
ONLY
R273
IC301
UDA1328TS
IC401
NJM4556AM
IC401(1/2)
IC401(2/2)
L1
L2
R1
R2
AUDIO OUT
(2CH)
L
R
AUDIO OUT
(5.1CH)
(FRONT)
IC521
BA4560F
IC521(1/2)
IC521(2/2)
CENTER
SUB
WOOFER
AUDIO OUT
(5.1CH)
IC601(1/2)
IC601(2/2)
L
R
SURROUND
IC601
BA4560F
IC201
TC9409BF-001
IC271
TC74VHC157FT
DV-K302CD ONLY
CN101
(26P)
L AJKB ASSY
M VJKB ASSY
(16P)
CN501
(V/Cb)
(Y)
(C/Cr)
JA401
CONTROL
IN
V+5D
V+12D
NJM78M08FA
IC150
REG
V+8V
DV-C302D
ONLY
R509
VNR
IC502
TA7302P
DV-K302CD ONLY
3IN 6OUT
VIDEO AMP
AIN
BIN
CIN
AMP
IC501
LA7137M
(V)
JA504
COMPOSITE
VIDEO OUT
JA503
S VIDEO
OUTPUT
(C)
PR
PB
Y
COMPONENT
VIDEO
OUT
JA505

3.2 SW, TRADE, MOTOR, SMEB, FGSB ASSYS and OVERALL WIRING DIAGRAMS

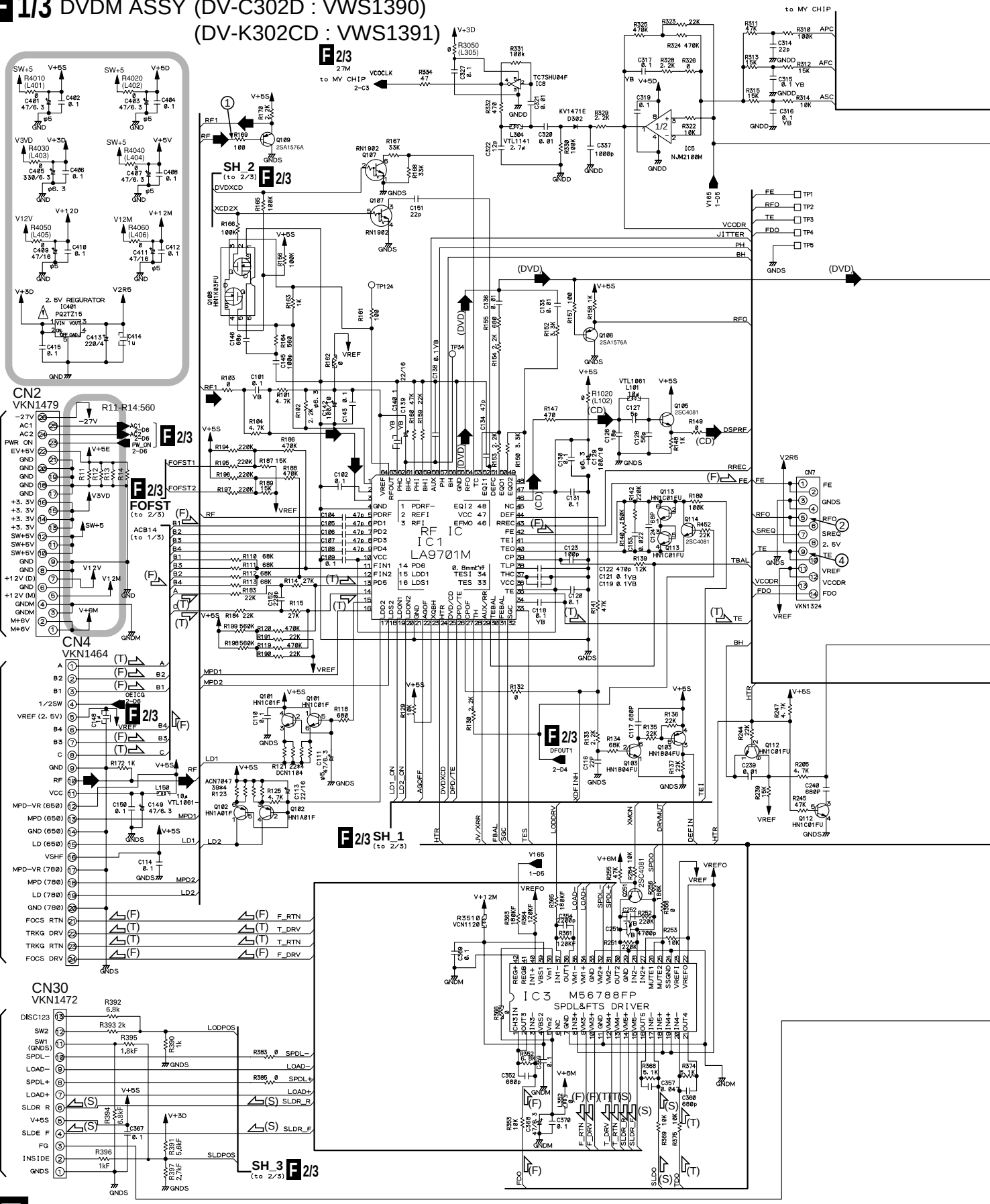


Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".

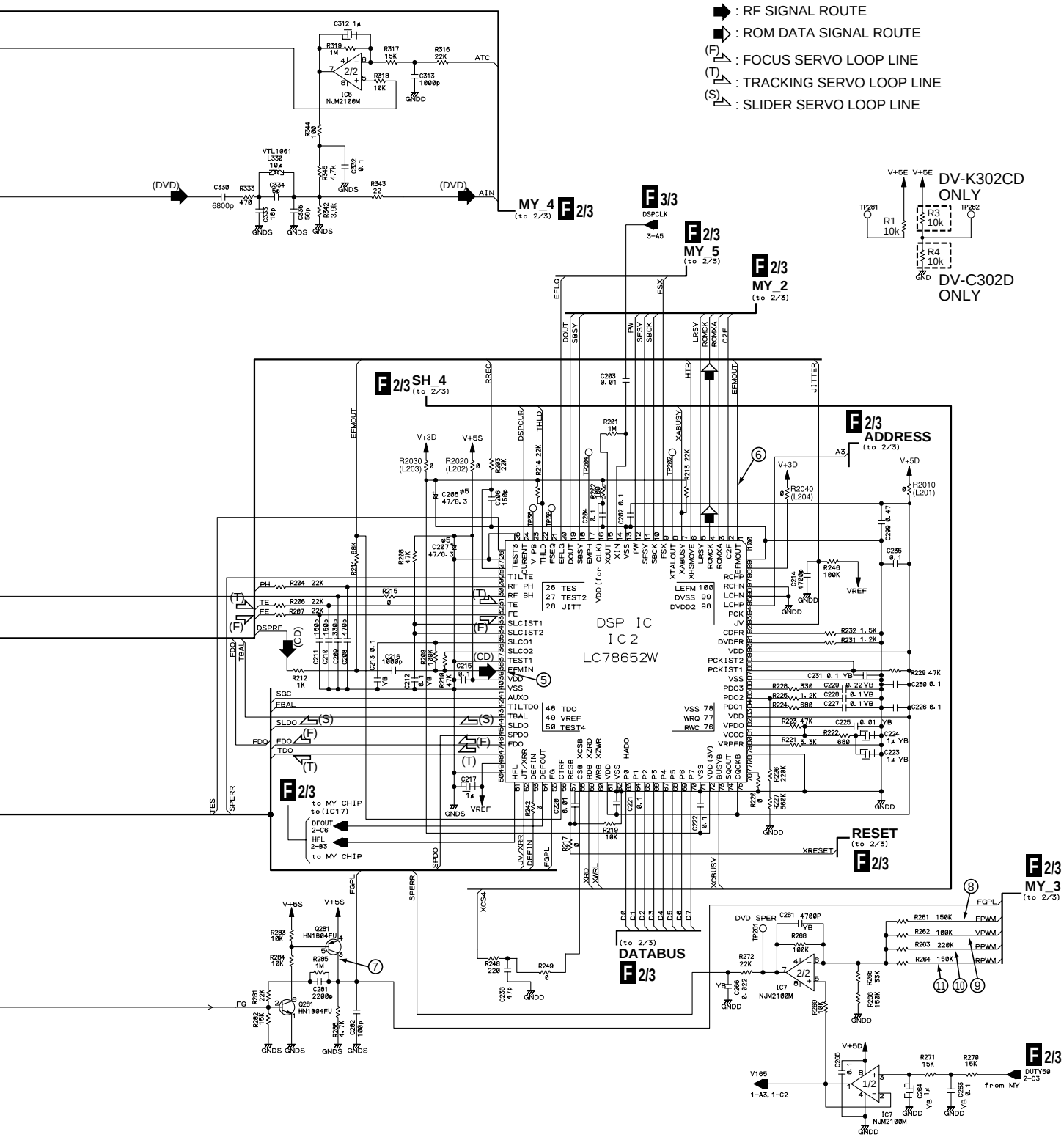


3.3 DVDM ASSY (1/3)

F 1/3 DVDM ASSY (DV-C302D : VWS1390)
(DV-K302CD : VWS1391)

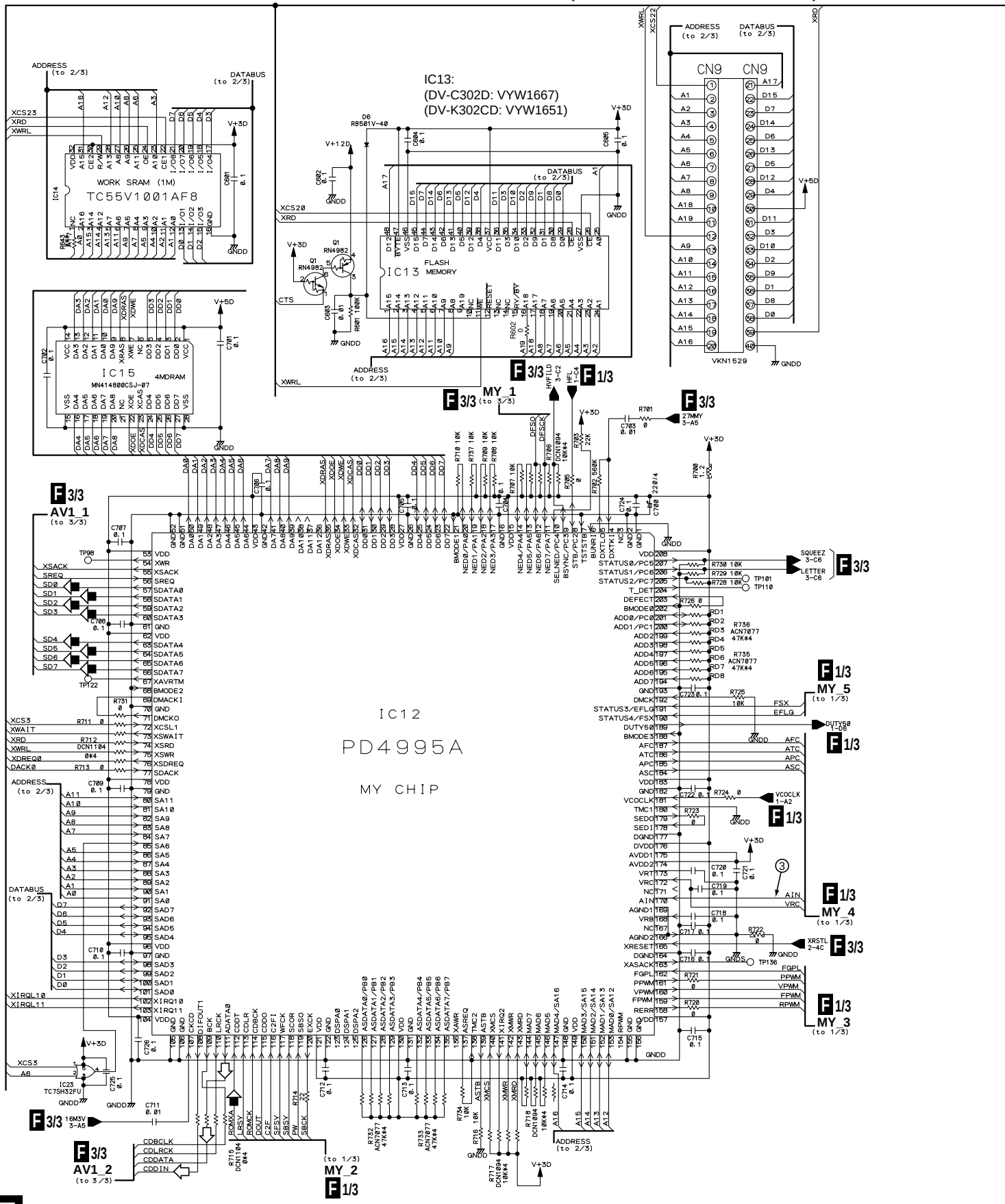


: The power supply is shown with the marked box.



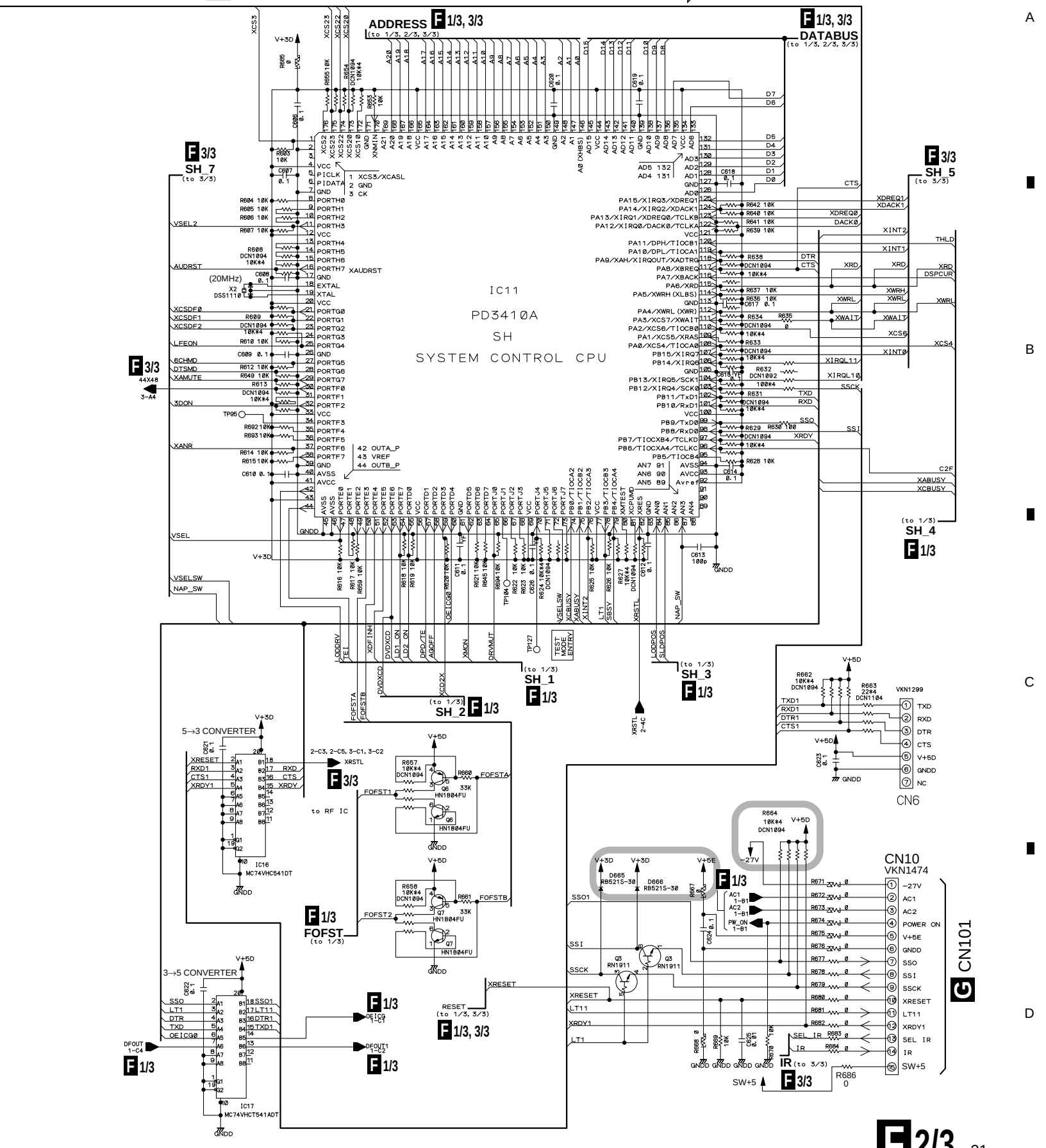
3.4 DVDM ASSY (2/3)

F 2/3 DVDM ASSY (DV-C302D : VWS1390)
(DV-K302CD : VWS1391)



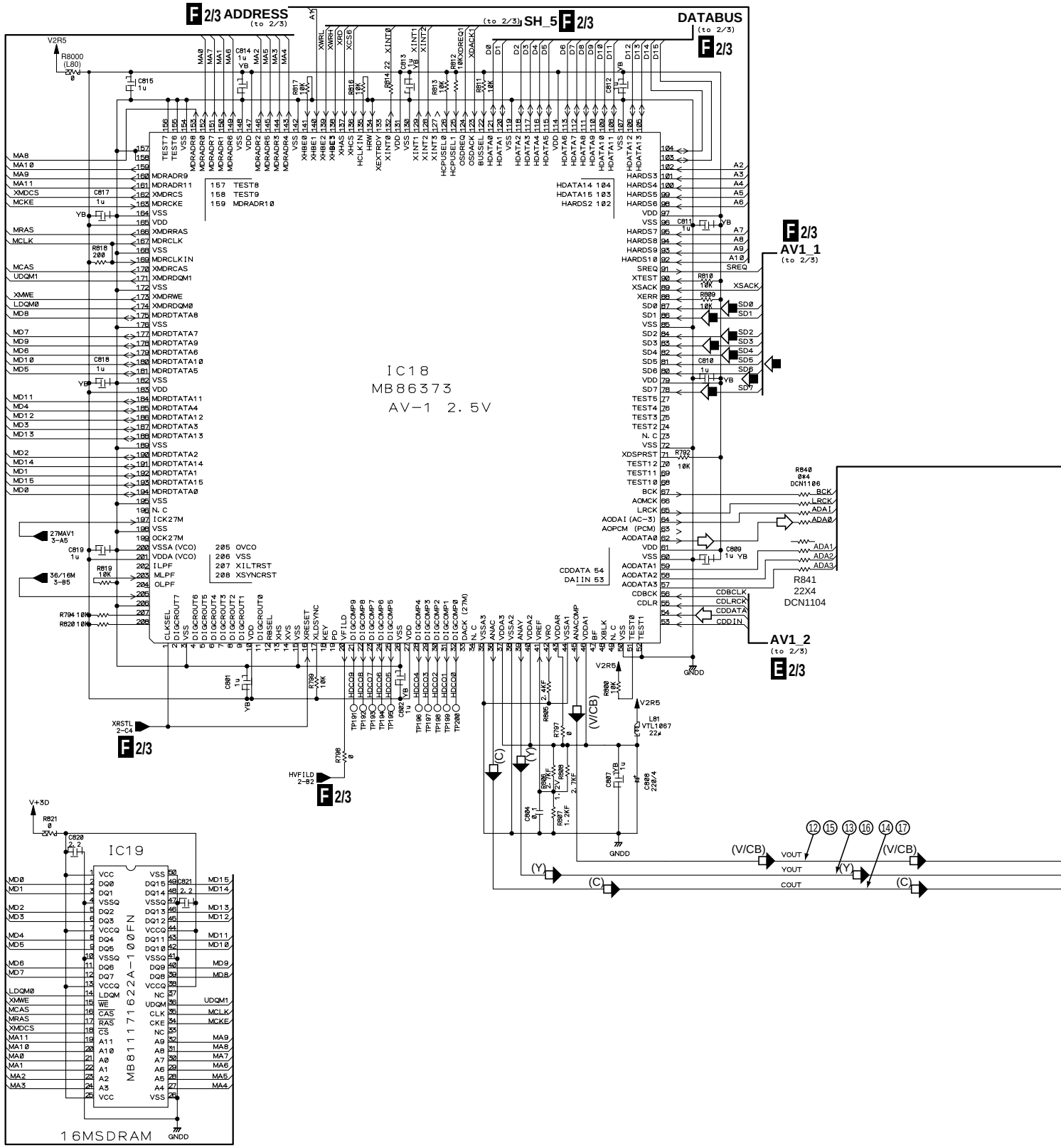
: The power supply is shown with the marked box.

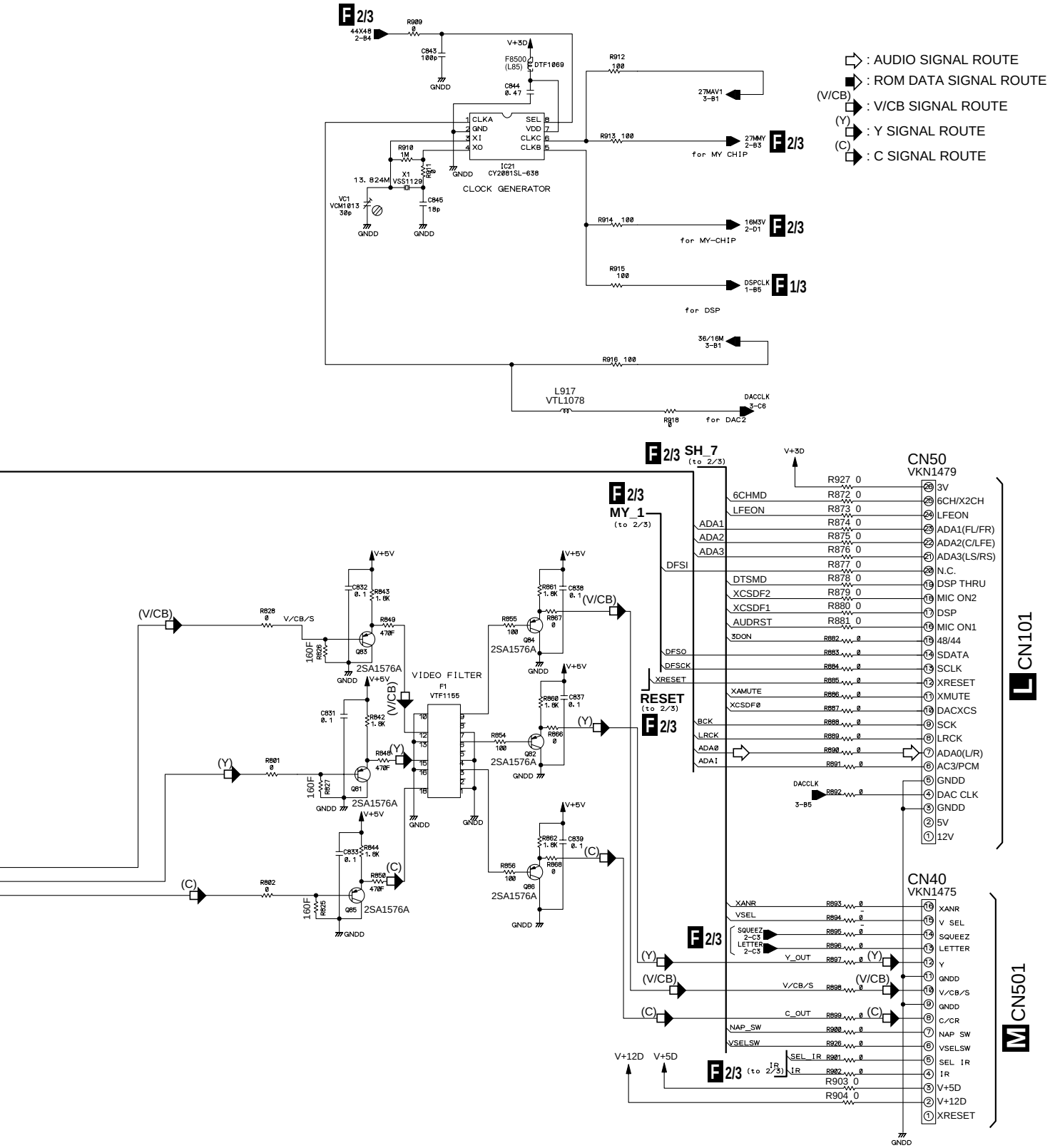
: ROM DATA SIGNAL ROUTE
: AUDIO SIGNAL ROUTE



3.5 DVDM ASSY (3/3)

F 3/3 DVDM ASSY (DV-C302D : VWS1390)
(DV-K302CD : VWS1391)

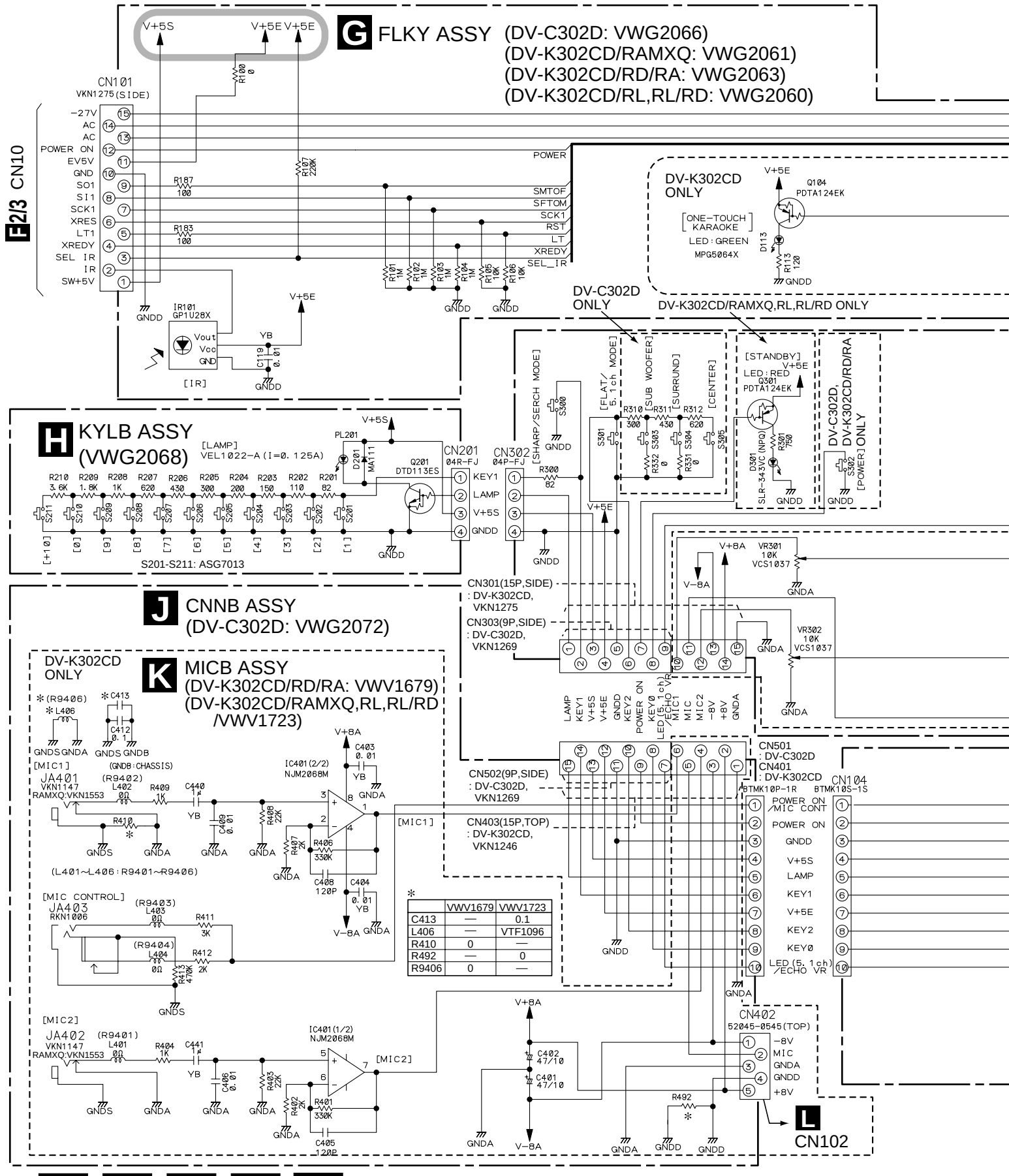



: AUDIO SIGNAL ROUTE
: ROM DATA SIGNAL ROUTE
(V/CB) : V/CB SIGNAL ROUTE
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE
F 2/3
44X48 2-B4
R909 0
C843 100p
GNDD
V+3D
F8500 (L85) DTF1069
C844 0.47
R912 100
27MAV1 3-B1
CLKA
GND
XI
XO
SEL
VDD
CLKG
CLKB
IC21 CY2081SL-638
CLOCK GENERATOR
R910 1M
X1 13.824M VSS1129
VC1 VCM1013 30p
C845 18p
R913 100
27MMY 2-B3
for MY CHIP
R914 100
16M3V 2-D1
for MY-CHIP
R915 100
DSPCLK 1-B5
F 1/3
for DSP
36/16M 3-B1
R916 100
L917 VTL1078
DACCLK 3-C6
R918 0
for DAC2

F 2/3 SH_7 (to 2/3)
F 2/3 MY_1 (to 2/3)
RESET (to 2/3) F 2/3
V+3D
CN50 VKN1479
L CN101
CN40 VKN1475
M CN501
6CHMD
LFEON
ADA1
ADA2
ADA3
DFSI
DTSMD
XCSDF2
XCSDF1
AUDRST
3DON
DFSO
DFSCK
XRESET
XAMUTE
XCSDF0
BCK
LRCK
ADA0
ADA1
DACCLK
3-B5
XANR
VSEL
SQUEEZ 2-C3
LETTER 2-C3
Y_OUT
V/CB/S
C_OUT
NAP_SW
VSELSW
SEL IR
IR
F 2/3 (to 2/3)
R903 0
R904 0
V+12D
V+5D
GNDD
3V
6CH/X2CH
LFEON
ADA1(FL/FR)
ADA2(C/LFE)
ADA3(LS/RS)
N.C.
DSP THRU
MIC ON2
DSP
MIC ON1
48/44
SDATA
SCLK
XRESET
XMUTE
DACXCS
SCK
LRCK
ADA0(L/R)
AC3/PCM
GNDD
DAC CLK
GNDD
5V
12V
XANR
V SEL
SQUEEZ
LETTER
Y
GNDD
V/CB/S
GNDD
C/CR
NAP SW
VSELSW
SEL IR
IR
V+5D
V+12D
XRESET
VIDEO FILTER
F1 VTF1155
2SA1576A
V+5V
GNDD
(V/CB)
(Y)
(C)

3.6 FLKY, KYLB, PWSB, CNNB and MICB ASSYS

: The power supply is shown with the marked box.



*	VWV1679	VWV1723
C413	—	0.1
L406	—	VTF1096
R410	0	—
R492	—	0
R9406	0	—

SWITCHES

FLKY ASSY

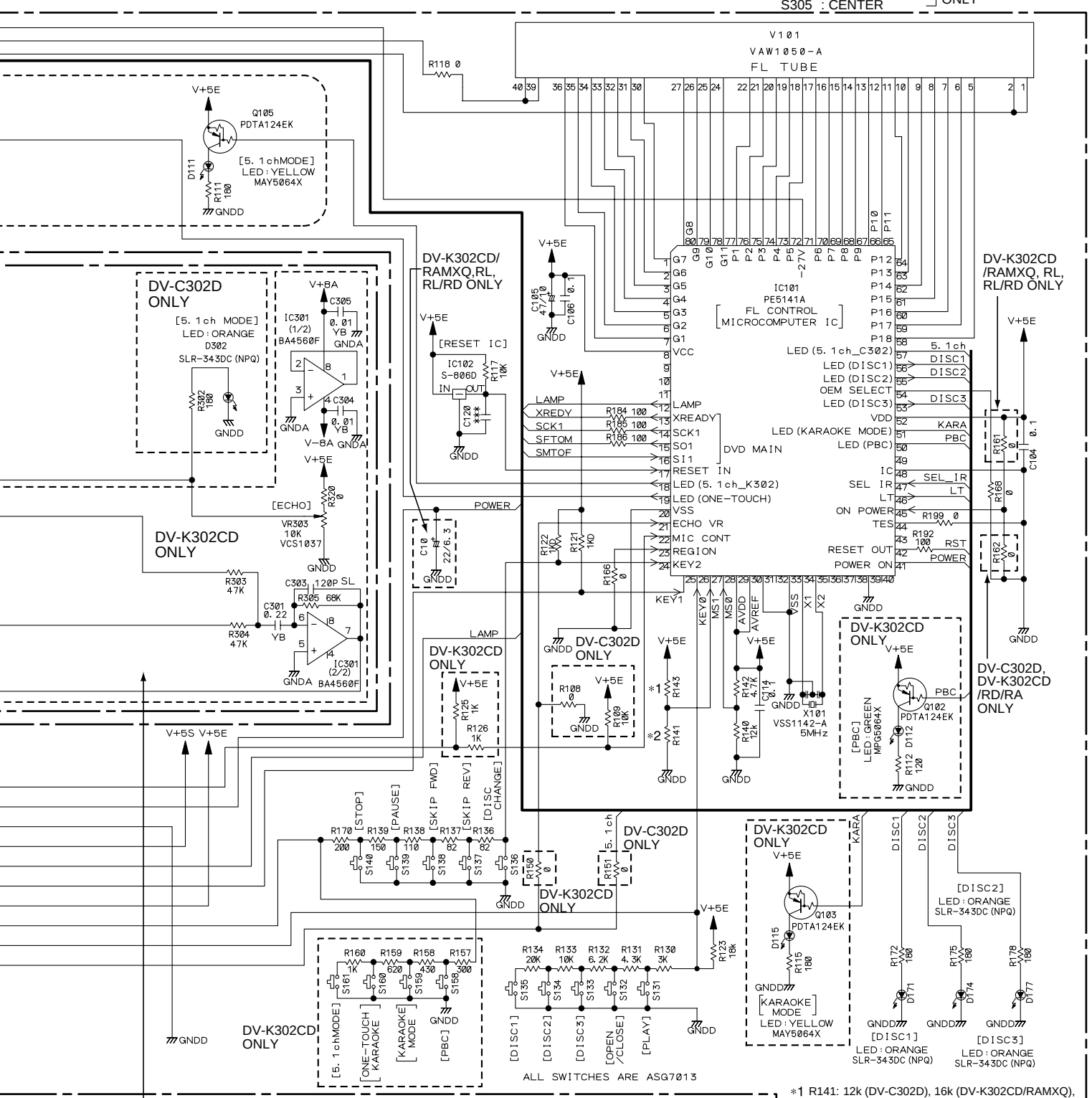
S131 : ▶ (PLAY)
S132 : OPEN/CLOSE (⏏)
S133 : DISC 3
S134 : DISC 2
S135 : DISC 1
S136 : DISC CHANGE
S137 : ◀◀◀◀ (REVERSE)
S138 : ▶▶▶▶I (FORWARD)
S139 : II (PAUSE)
S140 : ■ (STOP)
S158 : PLAYBACK CONTROL
S159 : KARAOKE MODE
S160 : ONE-TOUCH KARAOKE
S161 : 5.1 CH MODE
(DV-K302CD ONLY)

KYLB ASSY

S201 : 1
S202 : 2
S203 : 3
S204 : 4
S205 : 5
S206 : 6
S207 : 7
S208 : 8
S209 : 9
S210 : 0
S211 : +10

PWSB ASSY

S300 : SEARCH MODE (DV-C302D) / KEY CONTROL HIGH (#) (DV-K302CD)
S301 : 5.1CH MODE (DV-C302D) / KEY CONTROL LOW (♭) (DV-K302CD)
S302 : POWER (DV-C302D, DV-K302CD/RD/RA ONLY)
S303 : SUB WOOFER
S304 : SURROUND
S305 : CENTER
(DV-C302D ONLY)



∗1 R141: 12k (DV-C302D), 16k (DV-K302CD/RAMXQ), 27k (DV-K302CD/RD/RA,RL,RL/RD)

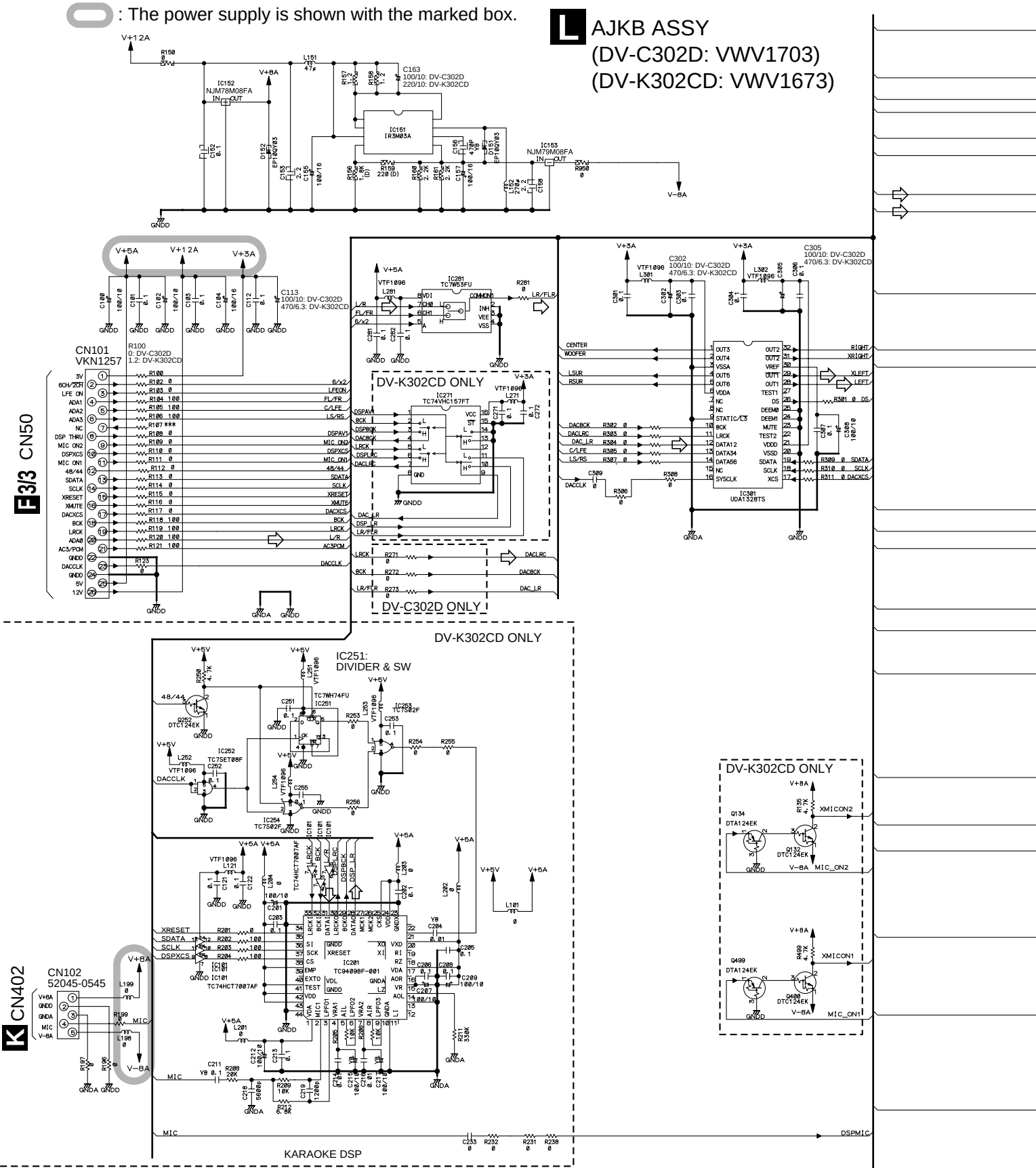
∗2 R143: 4.7k (DV-C302D), 2.7k (DV-K302CD/RAMXQ), 68k (DV-K302CD/RD/RA,RL,RL/RD)

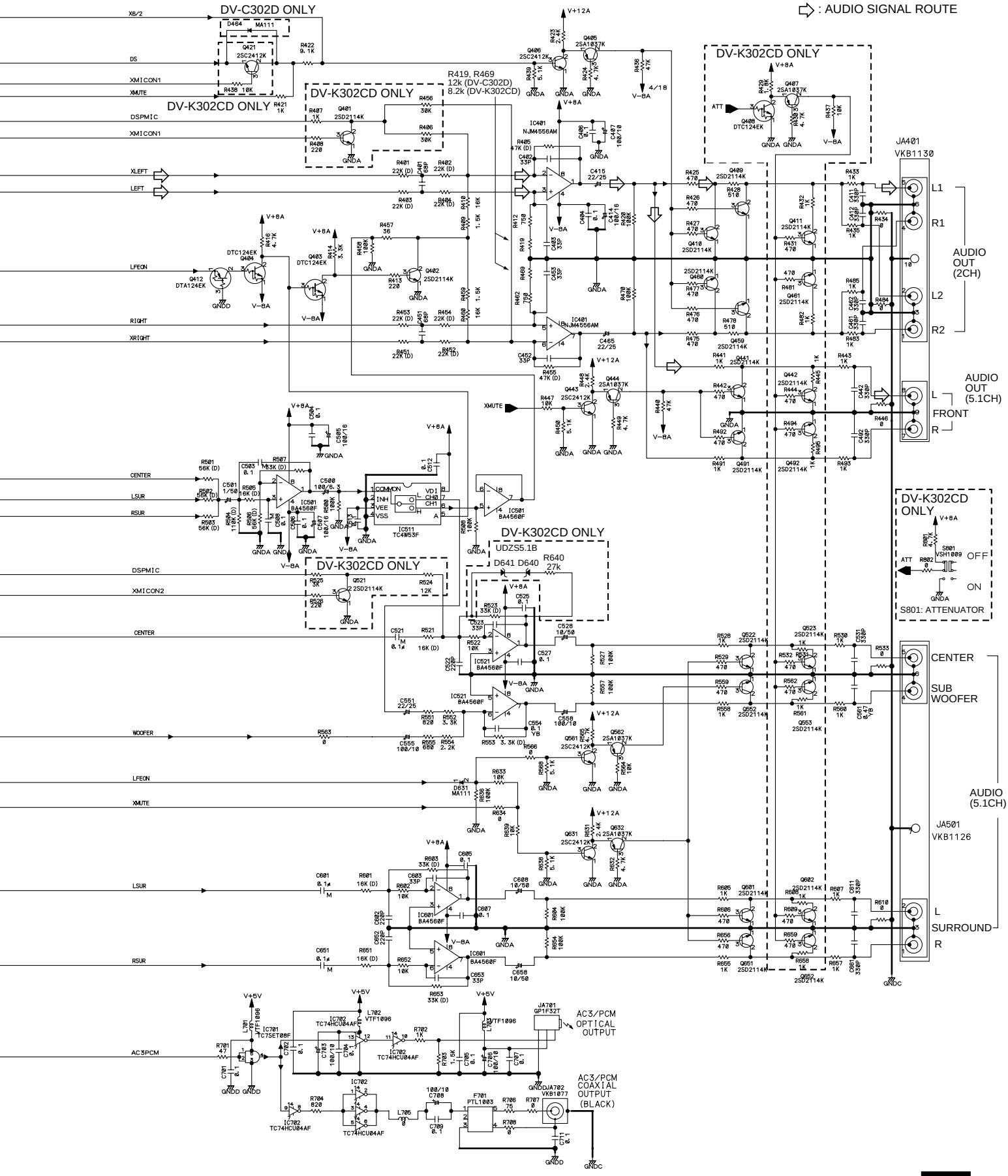
I PWSB ASSY (DV-C302D: VWG2071)
(DV-K302CD/RAMXQ,RL,RL/RD: VWG2070)
(DV-K302CD/RD/RA: VWG2069)

3.7 AJKB ASSY

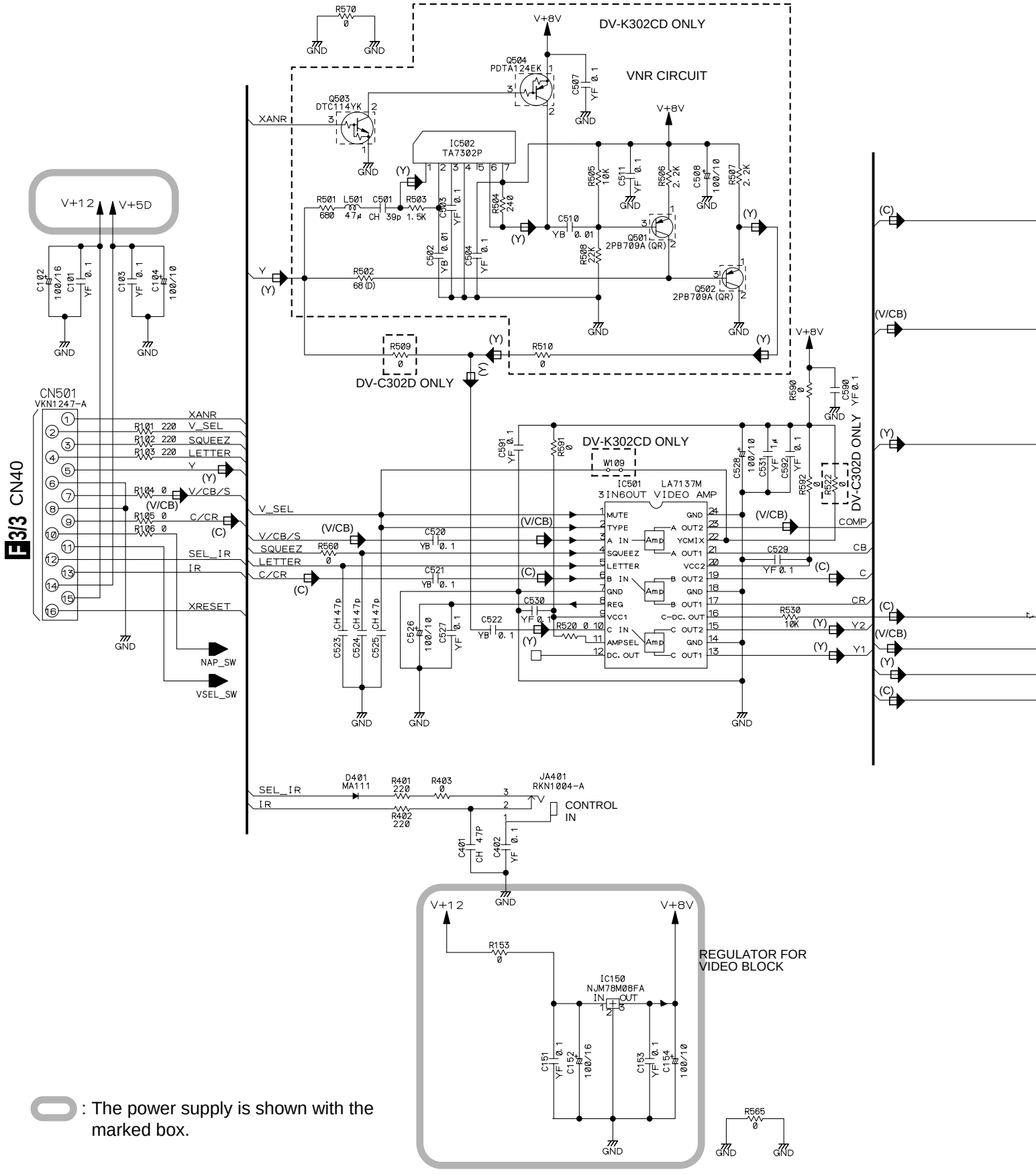
: The power supply is shown with the marked box.

L AJKB ASSY
(DV-C302D: VWV1703)
(DV-K302CD: VWV1673)




: AUDIO SIGNAL ROUTE
DV-C302D ONLY
DV-K302CD ONLY
R419, R469
12k (DV-C302D)
8.2k (DV-K302CD)
JA401
VKB1130
L1
R1
L2
R2
AUDIO OUT (2CH)
L
FRONT
R
AUDIO OUT (5.1CH)
CENTER
SUB WOOFER
L
SURROUND
R
AUDIO (5.1CH)
JA501
VKB1126
S801: ATTENUATOR
OFF
ON
AC3/PCM OPTICAL OUTPUT
AC3/PCM COAXIAL OUTPUT (BLACK)
X6/2
DS
XMICON1
XMUTE
DSPMIC
XLEFT
LEFT
RIGHT
XRIGHT
LFEON
CENTER
LSUR
RSUR
XMICON2
WOOFER
AC3PCM
V+12A
V+8A
V+5V
V-8A
GNDA
GNDD
GNDC

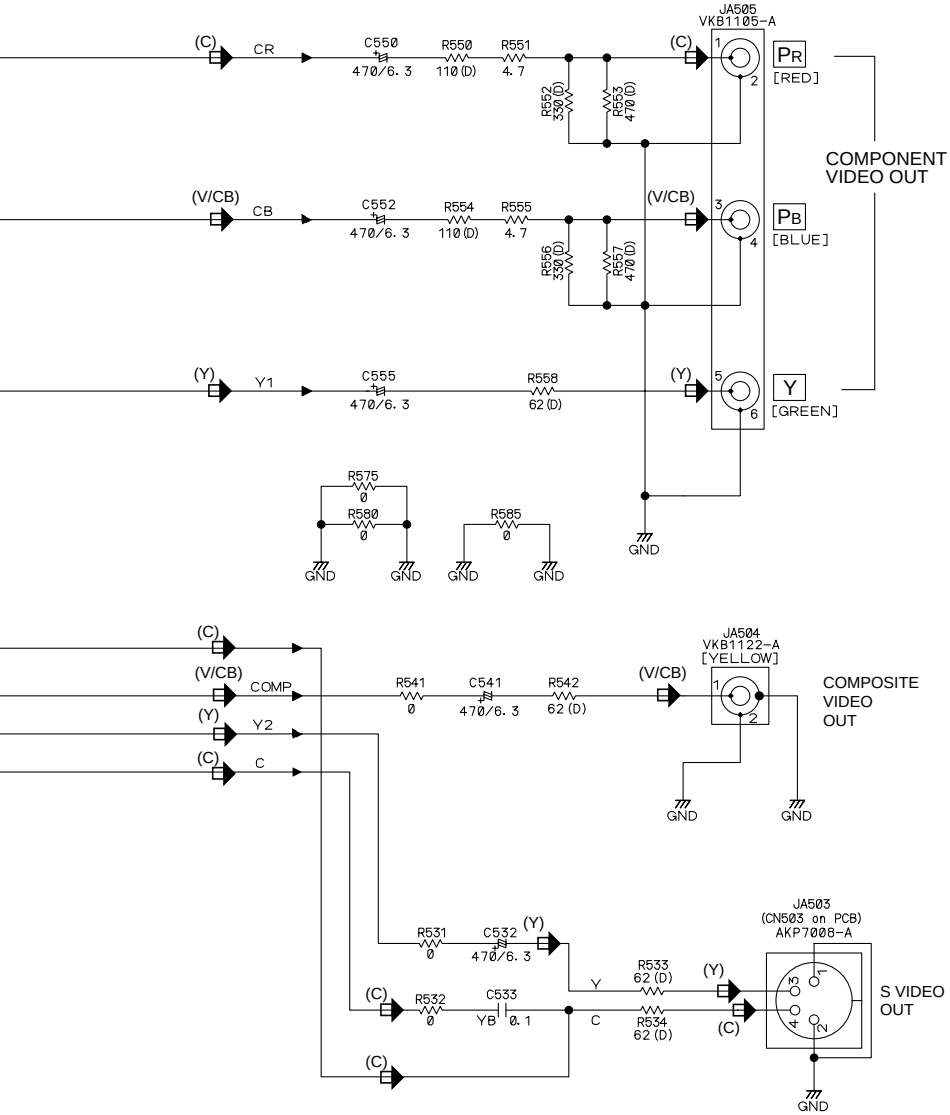
3.8 VJKB ASSYS



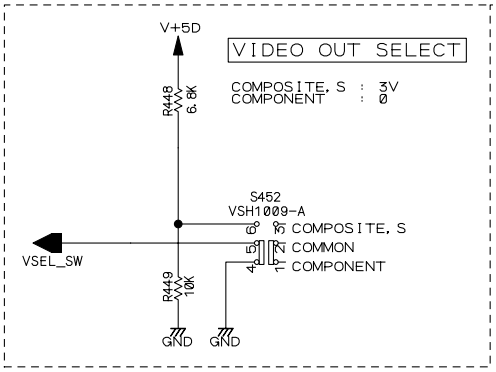
M

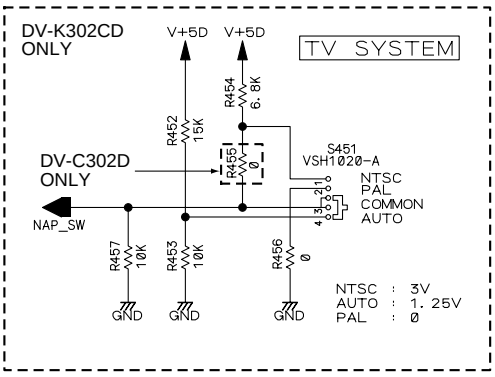
(DV-C302D: VWV1710)
(DV-K302CD/RAMXQ,RL,
RL/RD: VWV1674)
(DV-K302CD/RD/RA: VWV1709)

(V/CB) : V/CB SIGNAL ROUTE
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE



	LOW	OPEN	HIGH
TYPE	S&COMP	—	COMPONENT
MUTE	13, 17, 21 (OUT 2 OUTPUT)	NO MUTE (OUT 1,2 OUTPUT)	15, 19, 23 (OUT 1 OUTPUT)
AMP SEL	6dB	—	8.5dB
Y/C MIX	ON	—	OFF

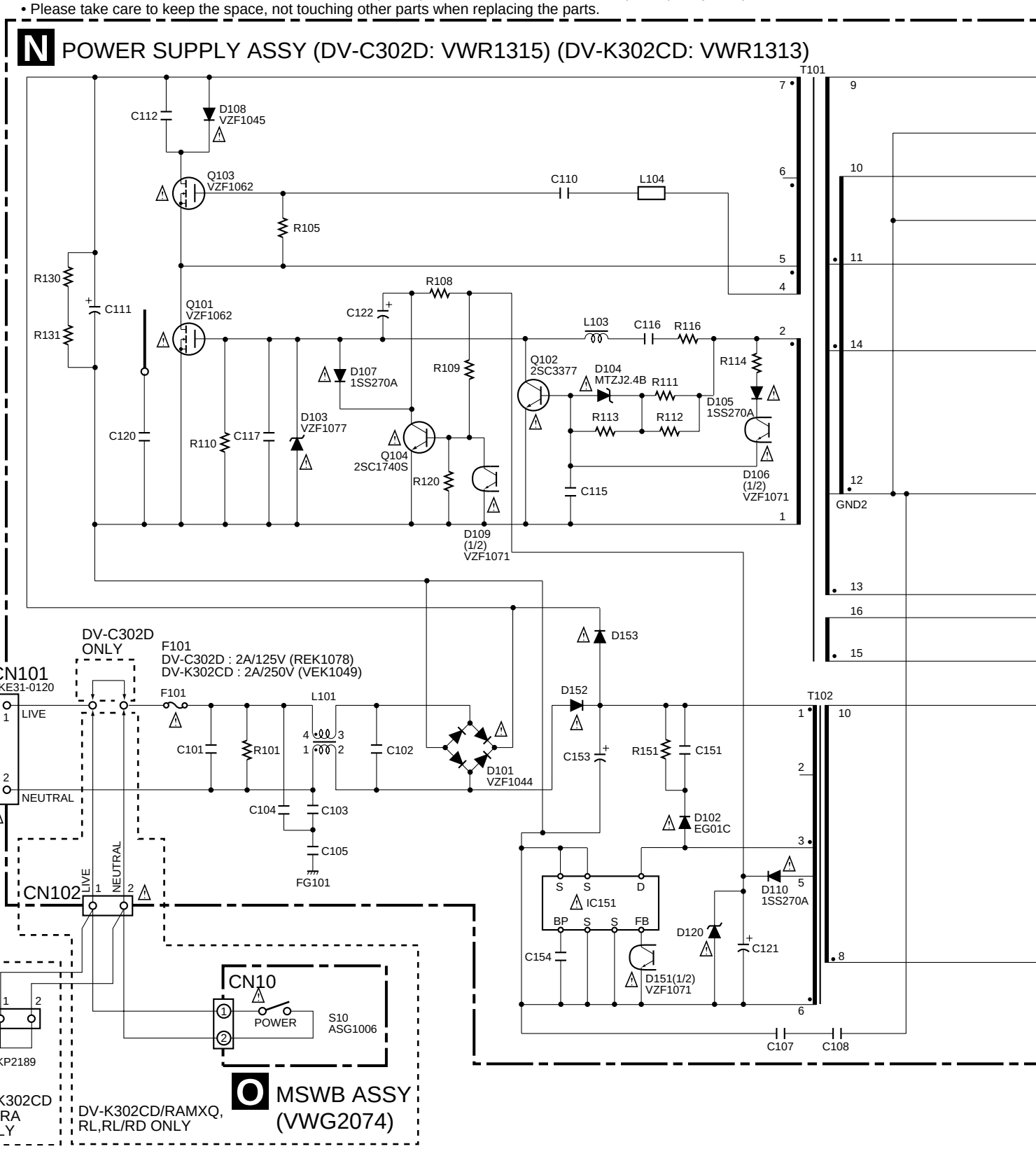




3.9 POWER SUPPLY and MSWB ASSYS

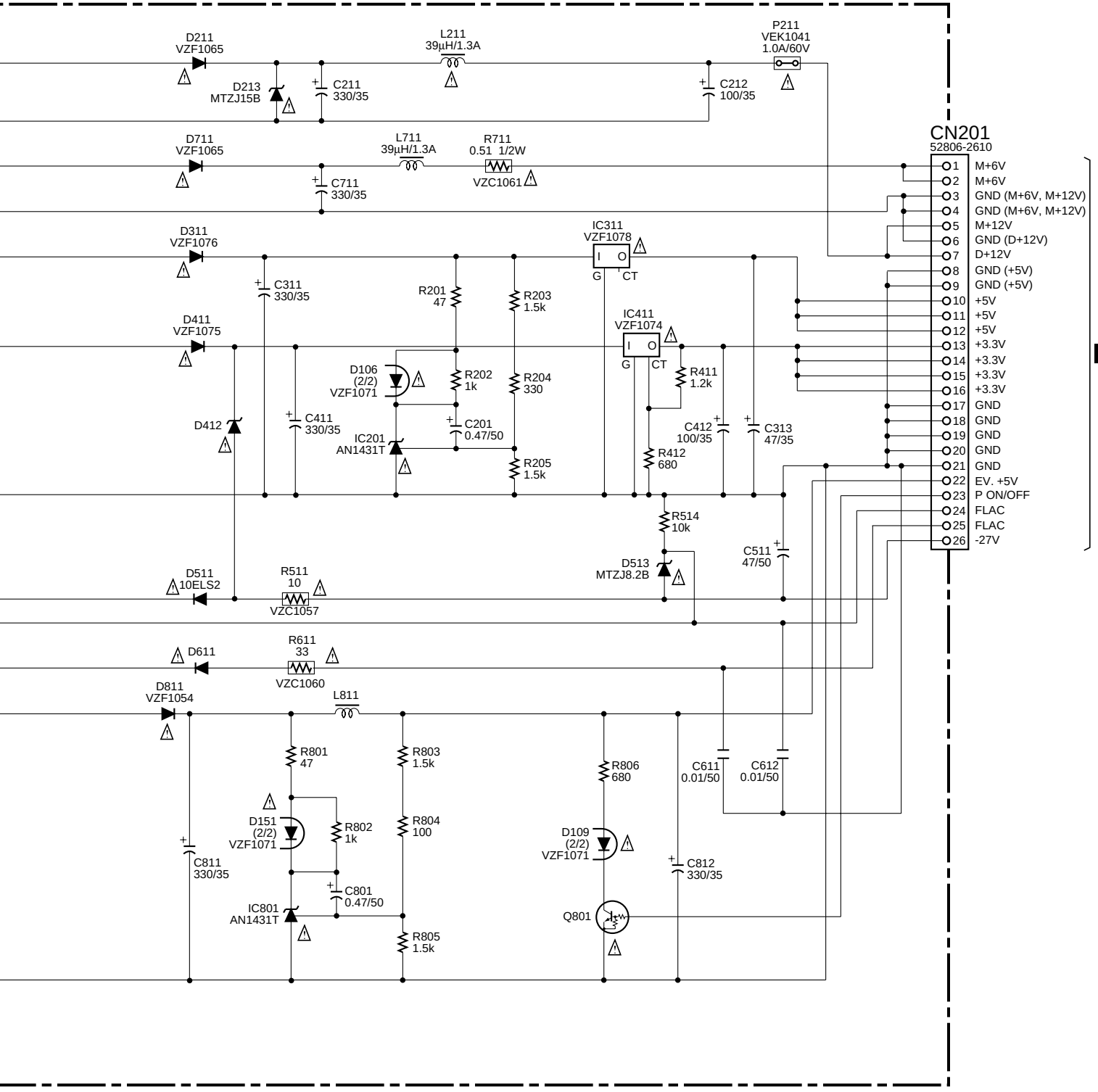
《 NOTE OF SPARE PARTS IN POWER SUPPLY (SYPS) ASSY 》

- In case of repairing, use the described parts only to prevent an accident.
- Please write the red √ mark on the board when the primary section of POWER SUPPLY (SYPS) Assy is repaired.
- Please take care to keep the space, not touching other parts when replacing the parts.



• NOTE FOR FUSE REPLACEMENT

CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.



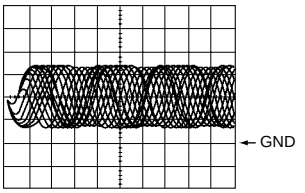
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491001 MFD. BY LITTELFUSE INC. FOR P211.

■ WAVEFORMS

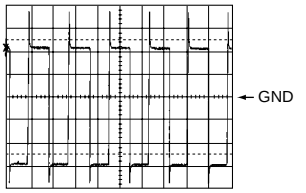
Note : The encircled numbers denote measuring point in the schematic diagram.

Measurement condition : No. 1 to 4 and 6 to 11 : Disc MA1, Title 1-chp 1
No. 5 : CD, ABEX-784 Track 1
No. 12 to 14 : MJK1, Title 1-chp 4
No. 15 to 17 : MJK1, Title 1-chp 5

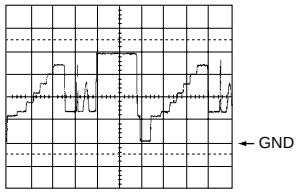
1 **Foot of R169 (RF)**
V: 100mV/div. H: 0.2µsec/div.



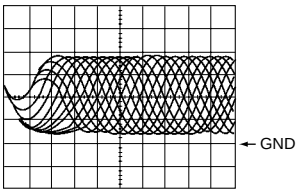
7 **Q281 - Collector (FG)**
V: 1V/div. H: 5msec/div.



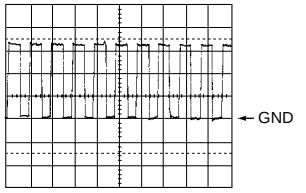
13 **IC18 - pin 39 (Y output)**
V: 0.2V/div. H: 5msec/div.



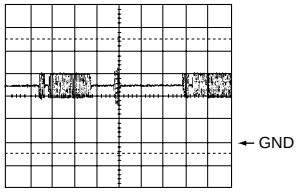
2 **CN7 - pin 5, 6 (RFO)**
V: 500mV/div. H: 0.1µsec/div.



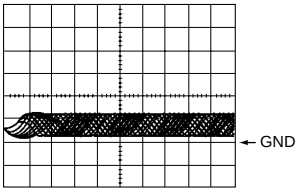
8 **Foot of R261 (FPWM)**
V: 1V/div. H: 5msec/div.



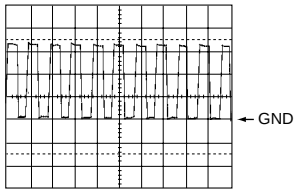
14 **IC18 - pin 6 (C output)**
V: 0.2V/div. H: 5msec/div.



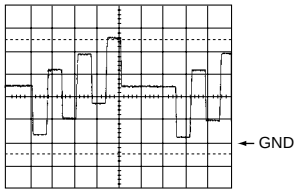
3 **IC12 - pin 70 (MY CHIP input)**
V: 1V/div. H: 0.2µsec/div.



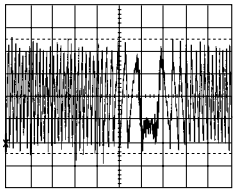
9 **Foot of R262 (VPWM)**
V: 1V/div. H: 5msec/div.



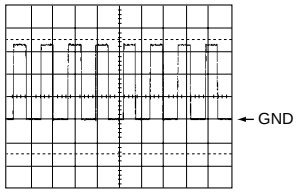
15 **IC18 - pin 45 (C_B output when selecting color difference output)**
V: 0.2V/div. H: 5msec/div.



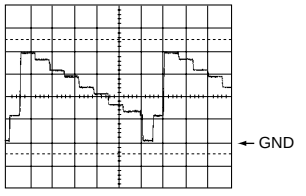
4 **CN7 - pin 9, 10 (Tracking Error) (AI-Inner Tracking Off)**
V: 500mV/div. H: 2msec/div.



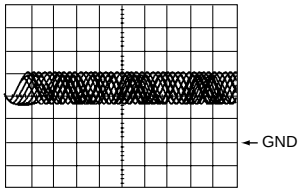
10 **Foot of R263 (PPWM)**
V: 1V/div. H: 5msec/div.



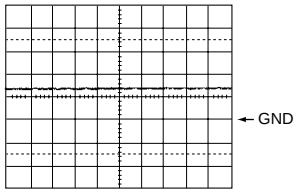
16 **IC18 - pin 39 (Y output when selecting color difference output)**
V: 0.2V/div. H: 5msec/div.



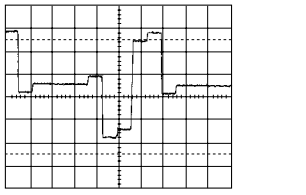
5 **IC2 - pin 39 (EFM before slice)**
V: 1V/div. H: 1µsec/div.



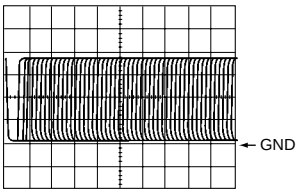
11 **Foot of R264 (RPWM)**
V: 1V/div. H: 5msec/div.



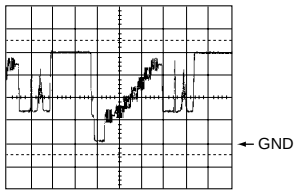
17 **IC18 - pin 36 (C_R output when selecting color difference output)**
V: 2V/div. H: 5msec/div.



6 **IC2 - pin 1 (EFM)**
V: 1V/div. H: 0.2µsec/div.



12 **IC18 - pin 45 (Composite Video output)**
V: 2V/div. H: 1msec/div.



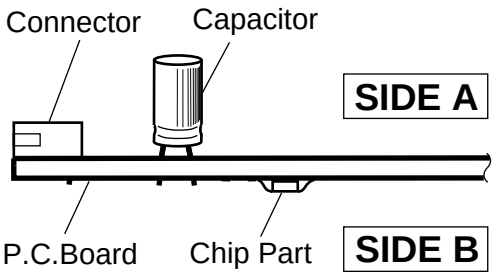
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

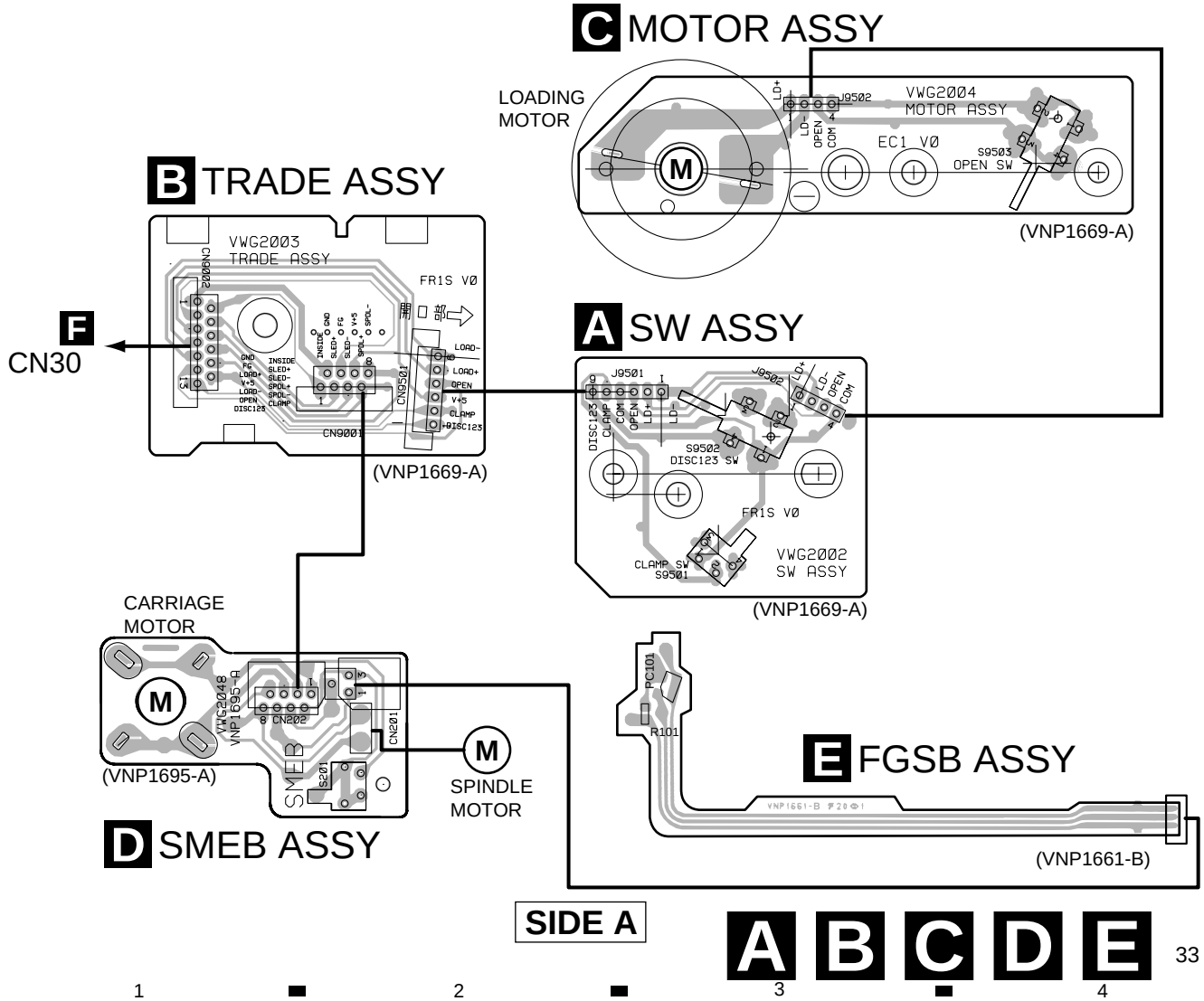
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.

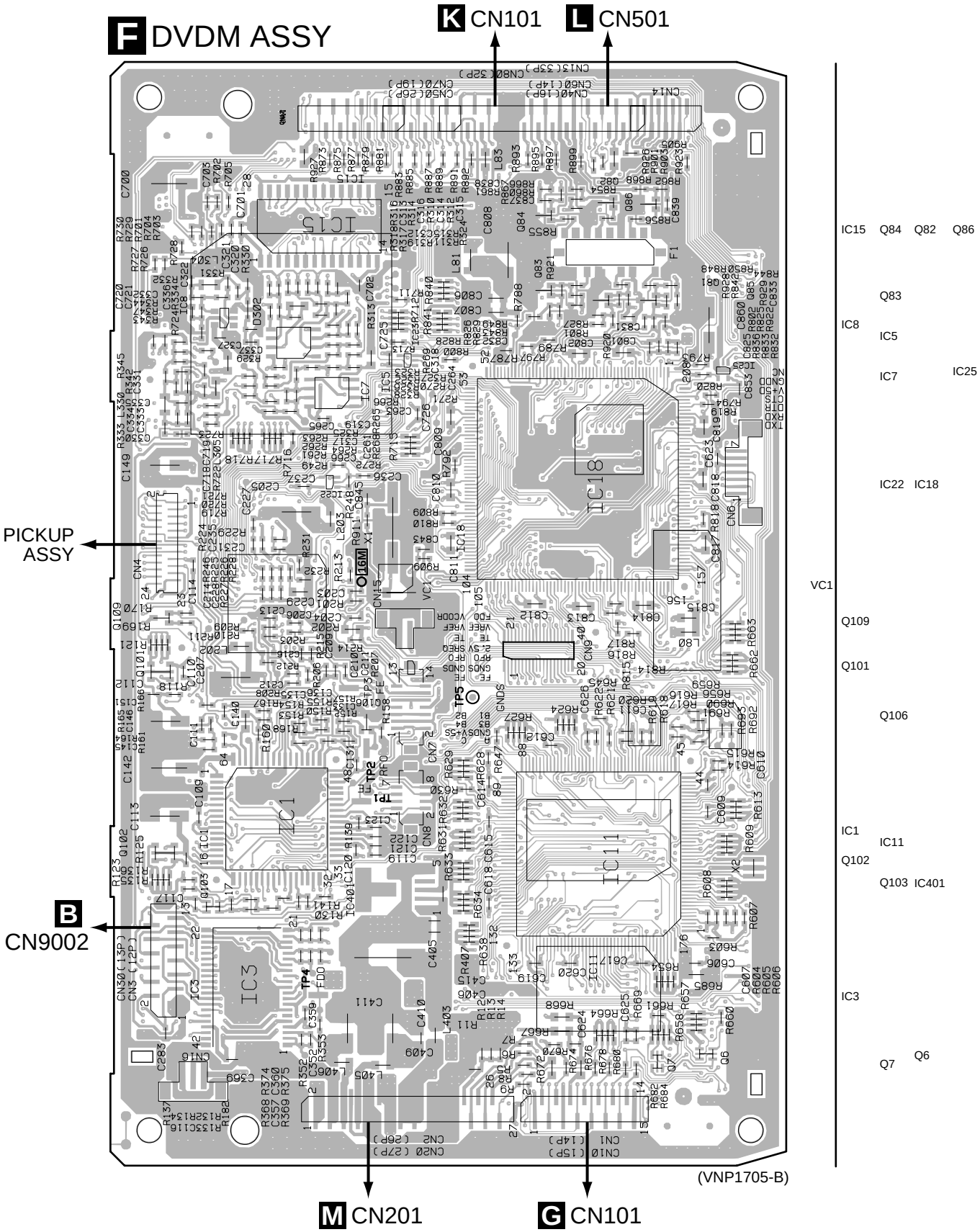


4.1 SW, TRADE, MOTOR, SMEB and FGSB ASSYS



4.2 DVDM ASSY

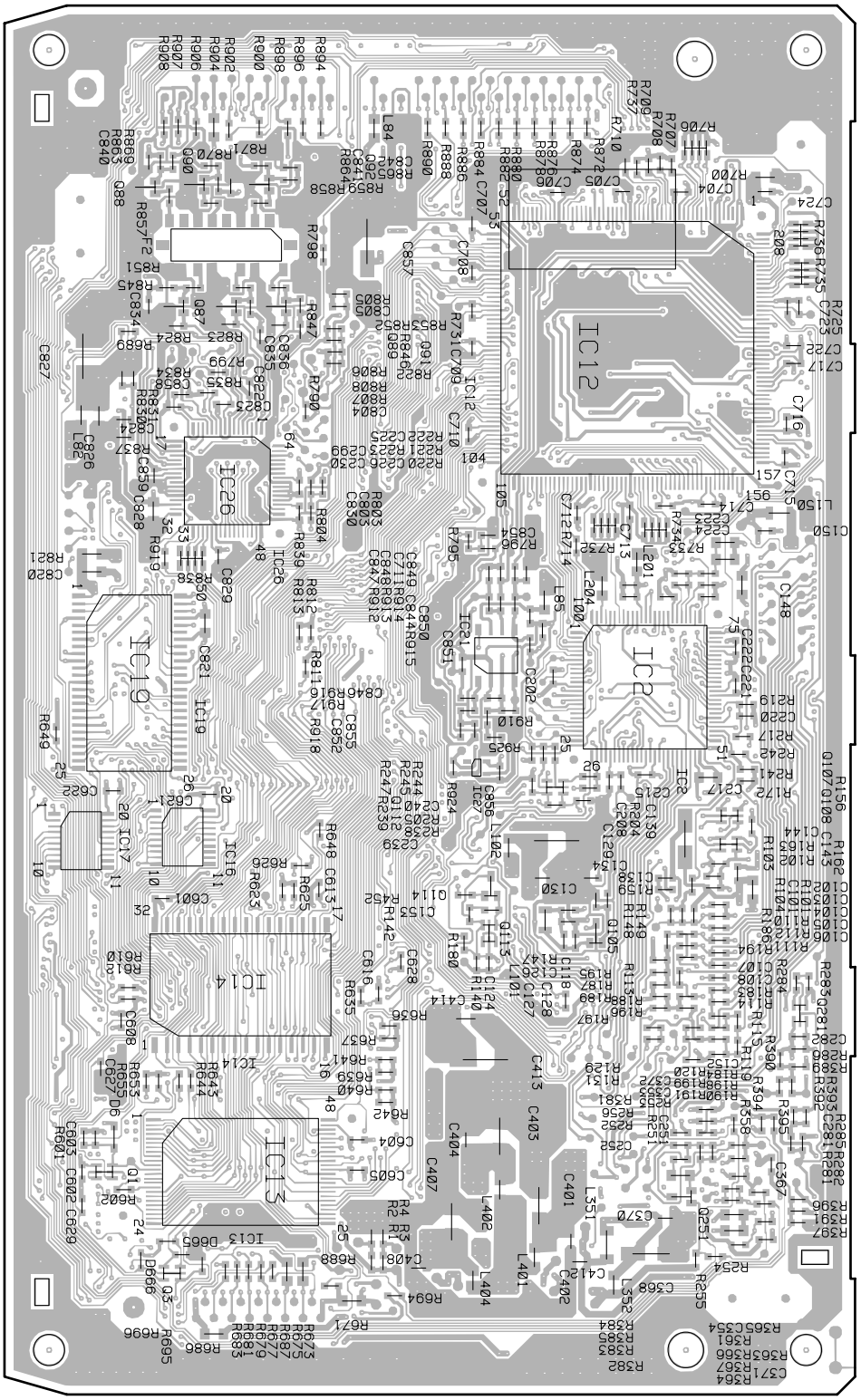
• This PCB is a four-layered board.



SIDE A

• This PCB is a four-layered board.

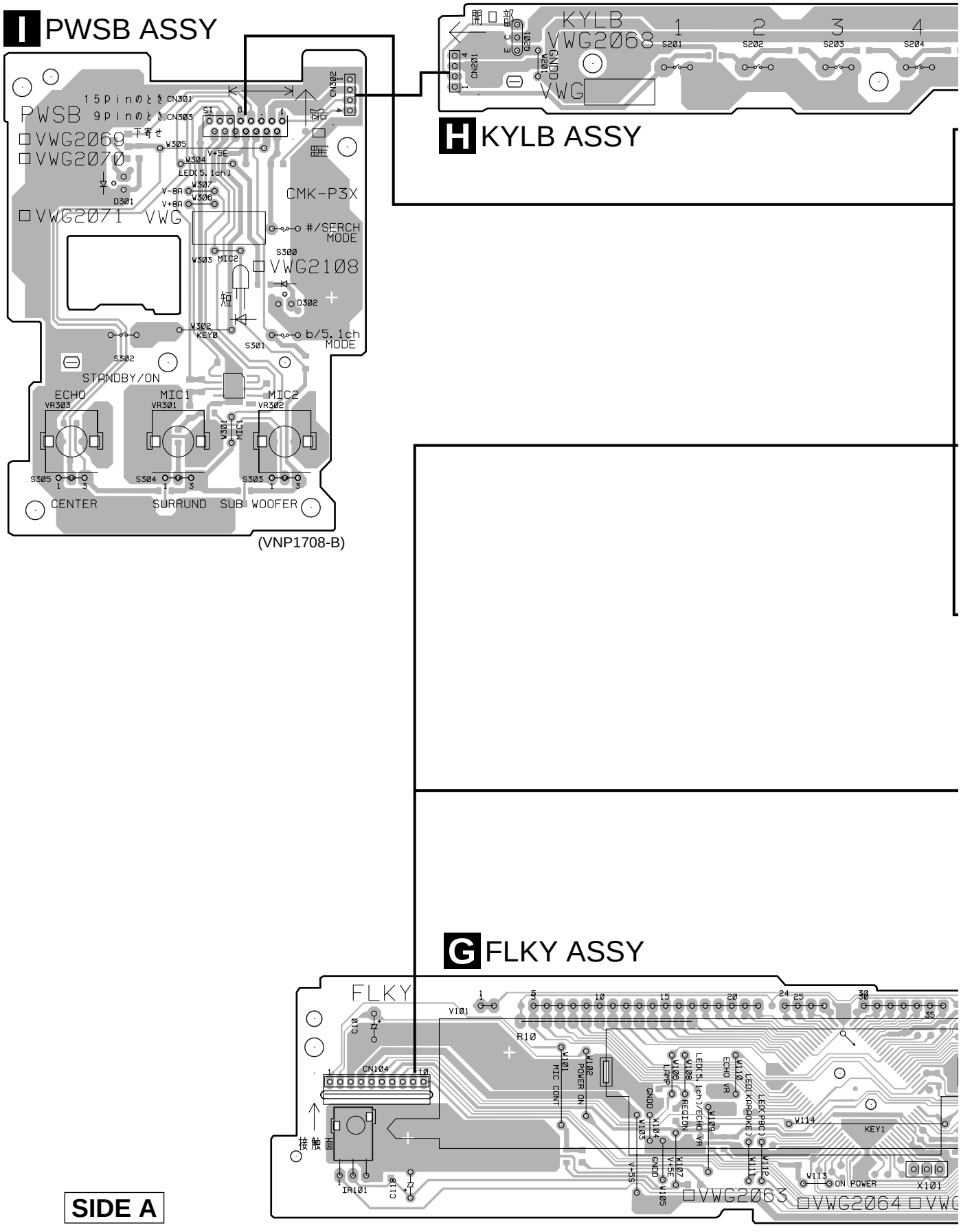
F DVDM ASSY



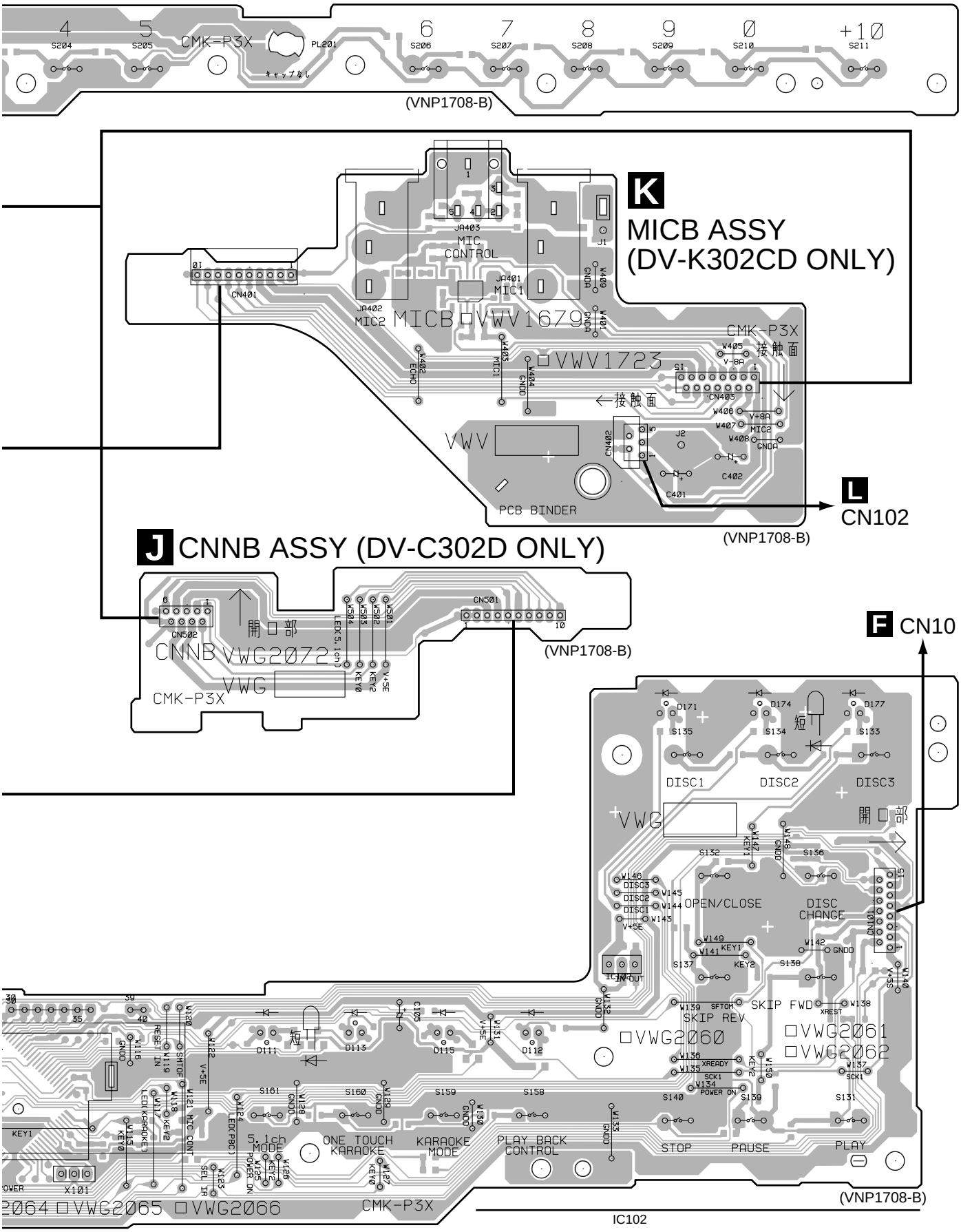
(VNP1705-B)

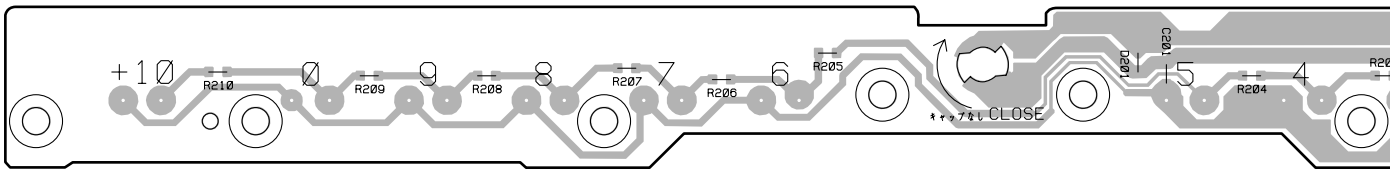
SIDE B

4.3 FLKY, KYLB, PWSB, CNNB and MICB ASSYS



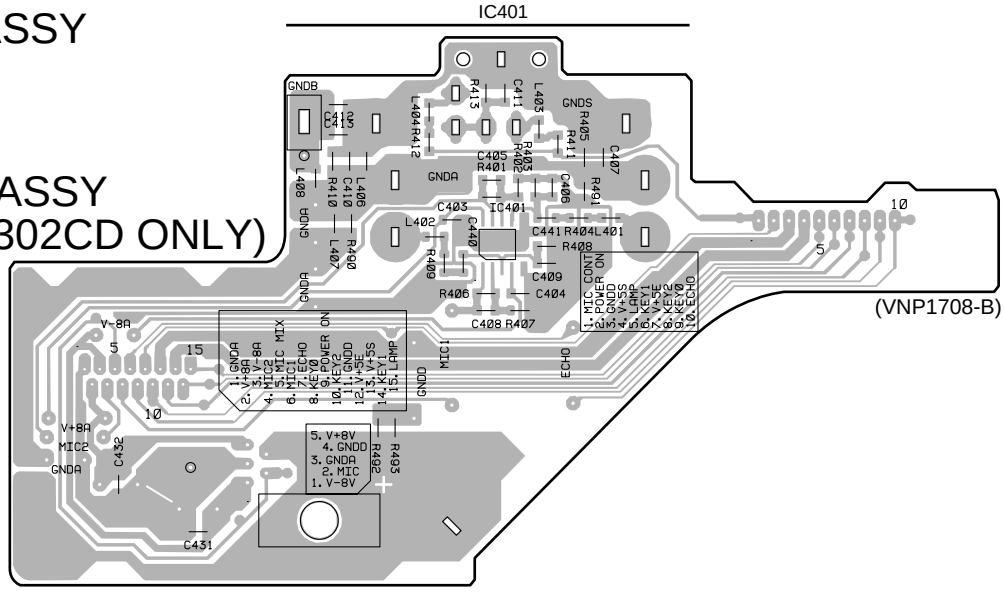
SIDE A


(VNP1708-B)
K
MICB ASSY
(DV-K302CD ONLY)
MICB □VWV1679
□VWV1723
CMK-P3X
接触面
PCB BINDER
L
CN102
(VNP1708-B)
J CNNB ASSY (DV-C302D ONLY)
CNNB VWG2072
VWG
CMK-P3X
(VNP1708-B)
F CN10
DISC1
DISC2
DISC3
OPEN/CLOSE
DISC CHANGE
SKIP FWD
SKIP REV
STOP
PAUSE
PLAY
PLAY BACK CONTROL
ONE TOUCH KARAOKE
KARAOKE MODE
5.1ch MODE
□VWG2060
□VWG2061
□VWG2062
□VWG2064 □VWG2065 □VWG2066
CMK-P3X
(VNP1708-B)
IC102



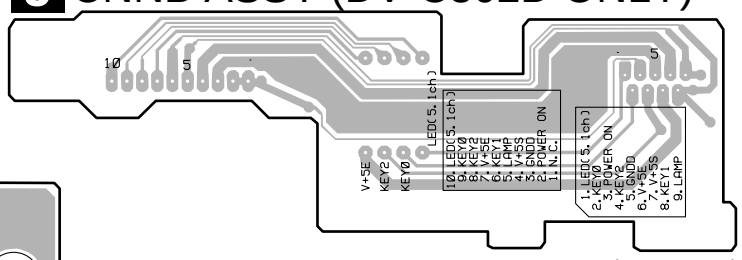
H KYLB ASSY

K MICB ASSY (DV-K302CD ONLY)



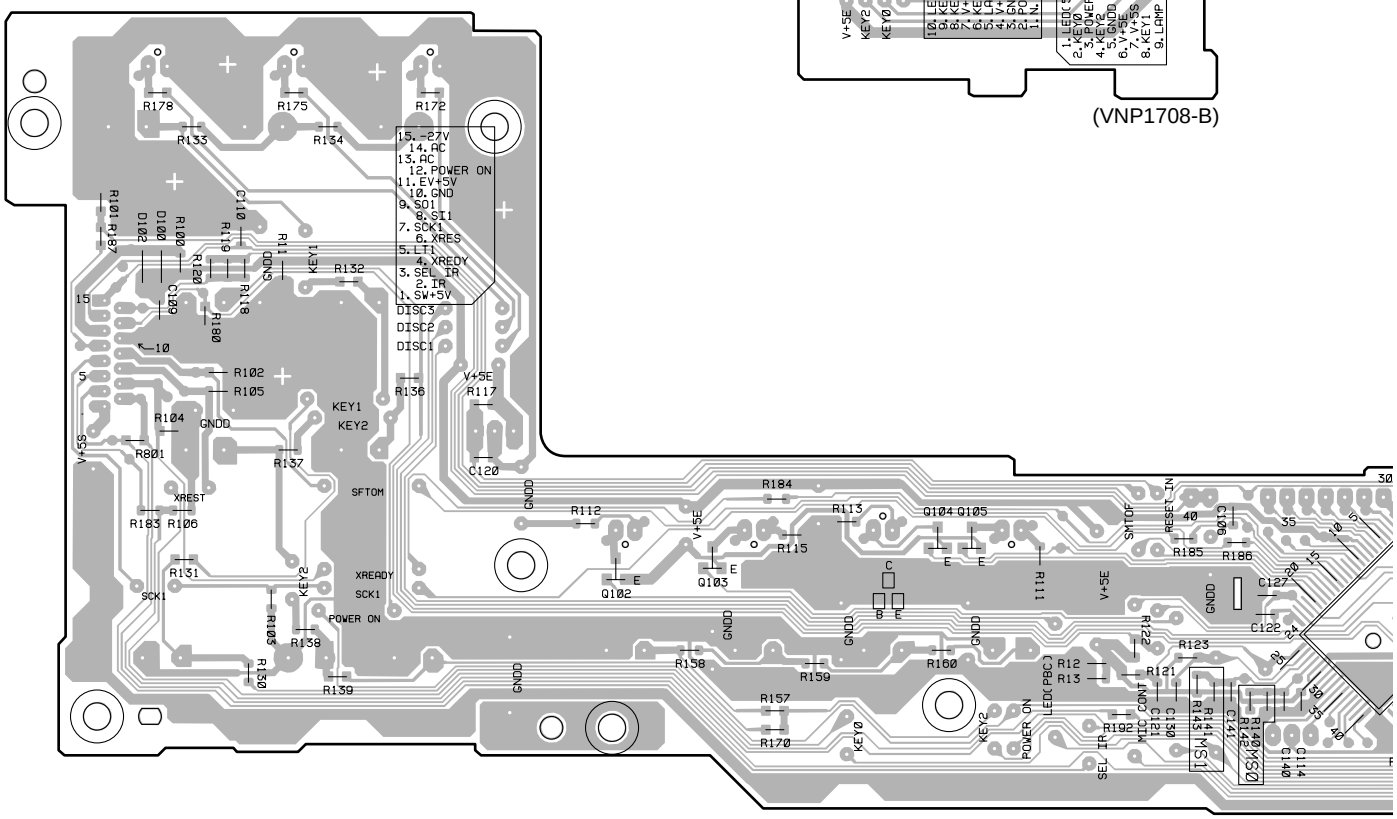
(VNP1708-B)

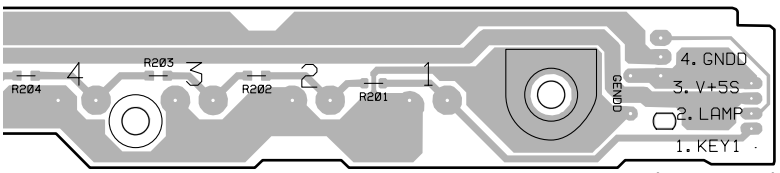
J CNNB ASSY (DV-C302D ONLY)



(VNP1708-B)

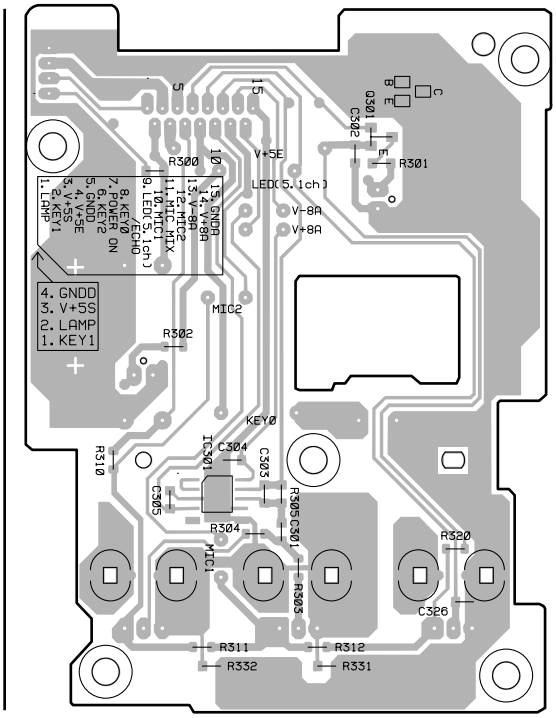
G FLKY ASSY



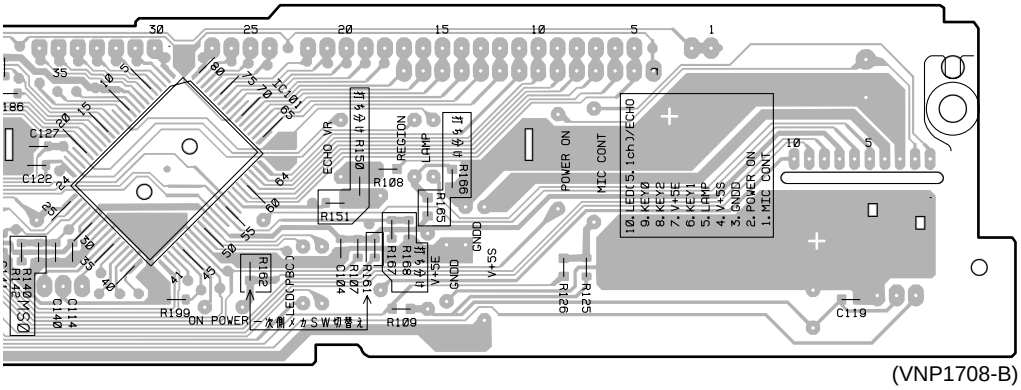


(VNP1708-B)

PWSB ASSY



(VNP1708-B)

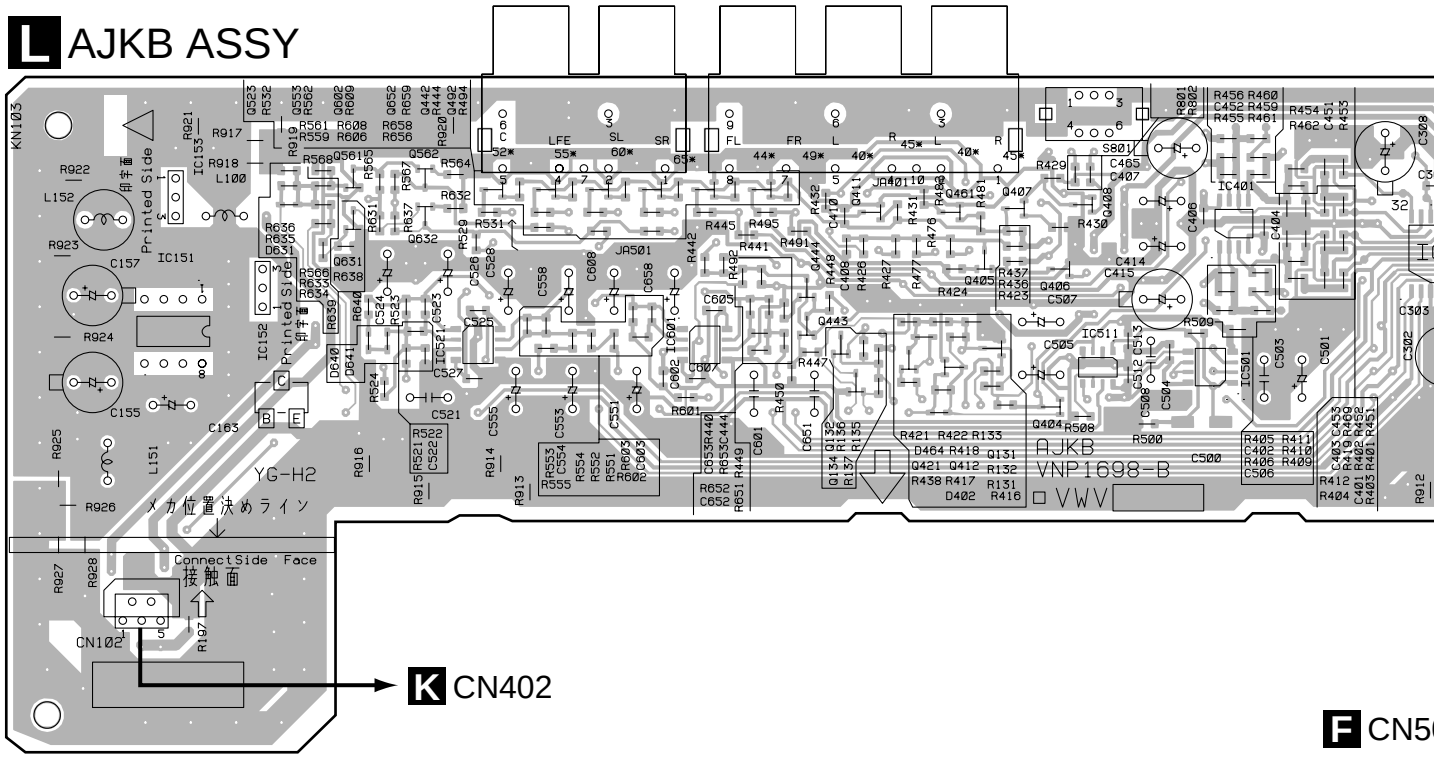


(VNP1708-B)

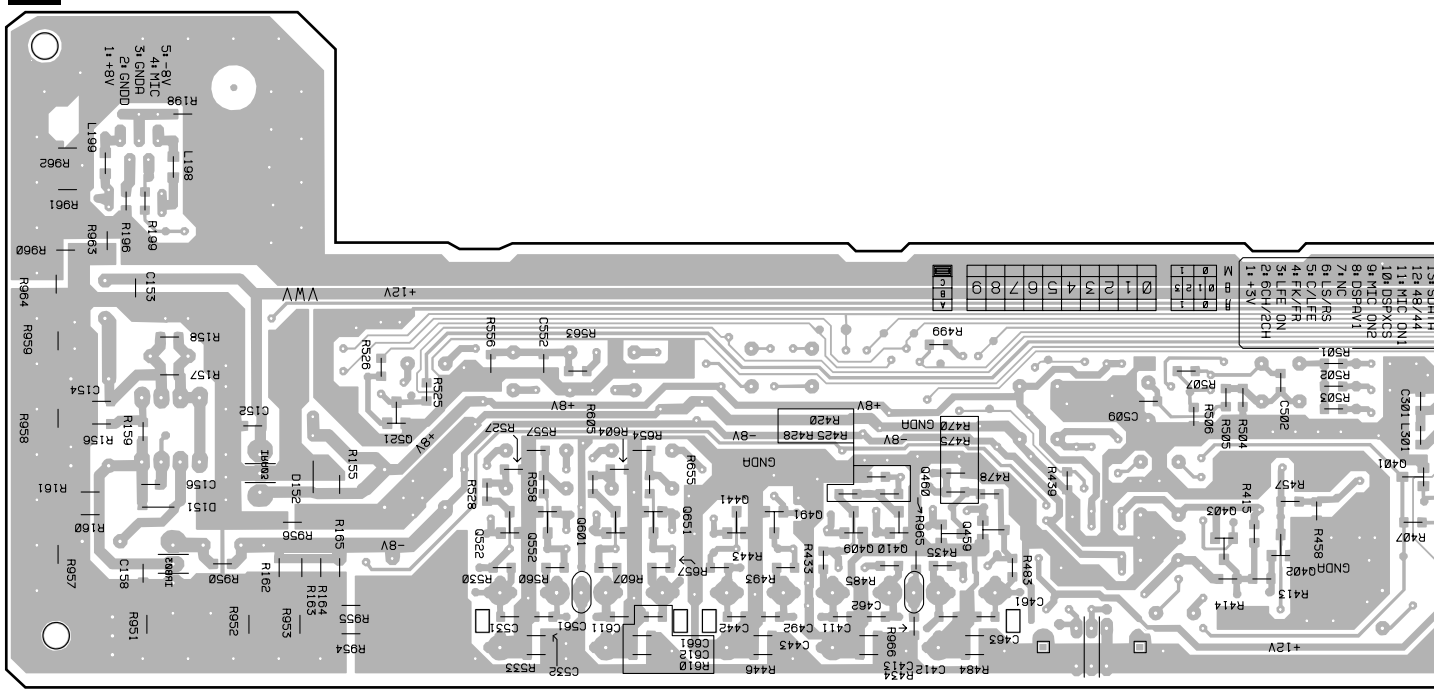
IC101

SIDE B

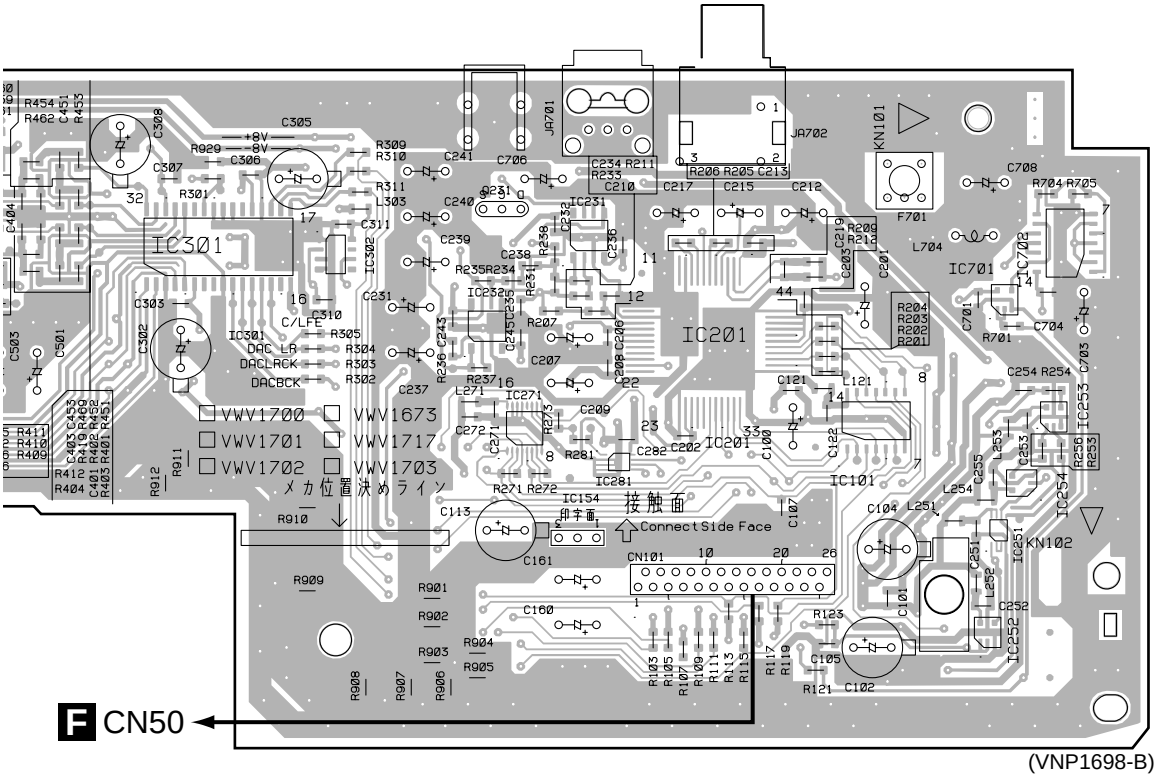
4.4 AJKB ASSY



IC153 Q561 Q562 Q523 Q553 Q602 Q442 Q492 Q411 Q461 Q407 Q408 IC401
IC151 IC152 Q631 Q632 Q652 Q444 Q132 Q421 Q405 Q406
IC521 IC601 Q443 Q134 Q412 Q131 IC511 IC501
Q404



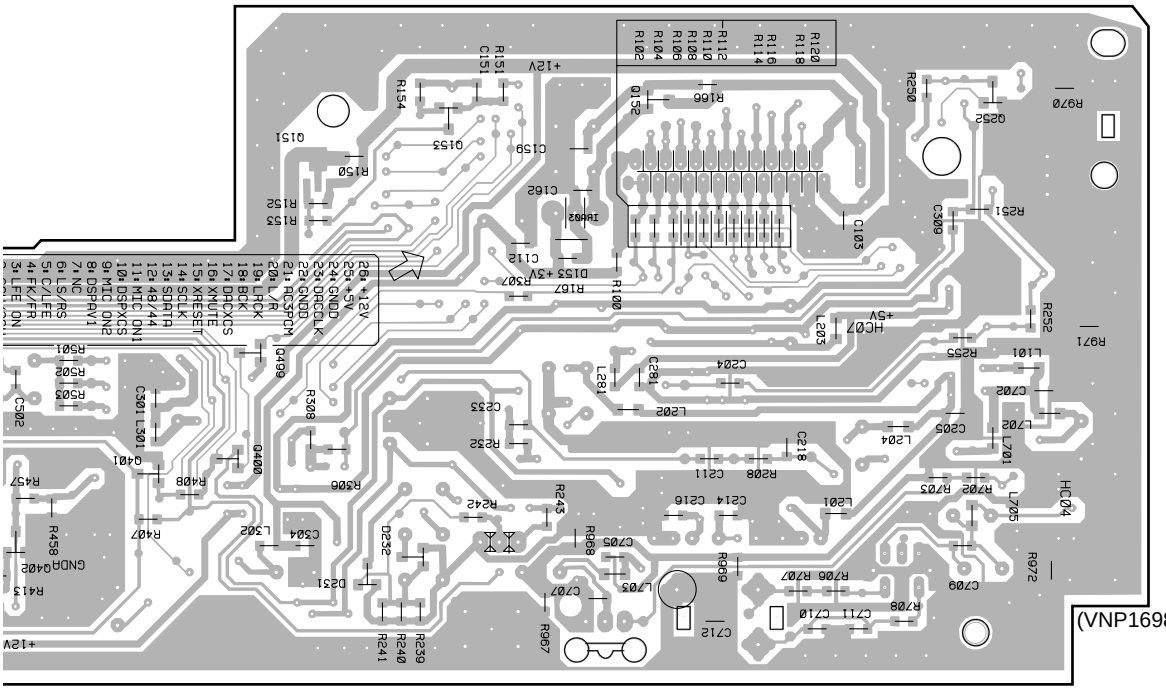
Q521 Q522 Q552 Q601 Q851 Q441 Q401 Q409 Q410 Q460 Q459 Q403 Q402 Q401



(VNP1698-B)

SIDE A

IC301 IC302 Q231 IC231 IC201 IC701 IC702
IC232 IC101 IC253
IC271 IC281 IC254
IC154 IC251
IC252

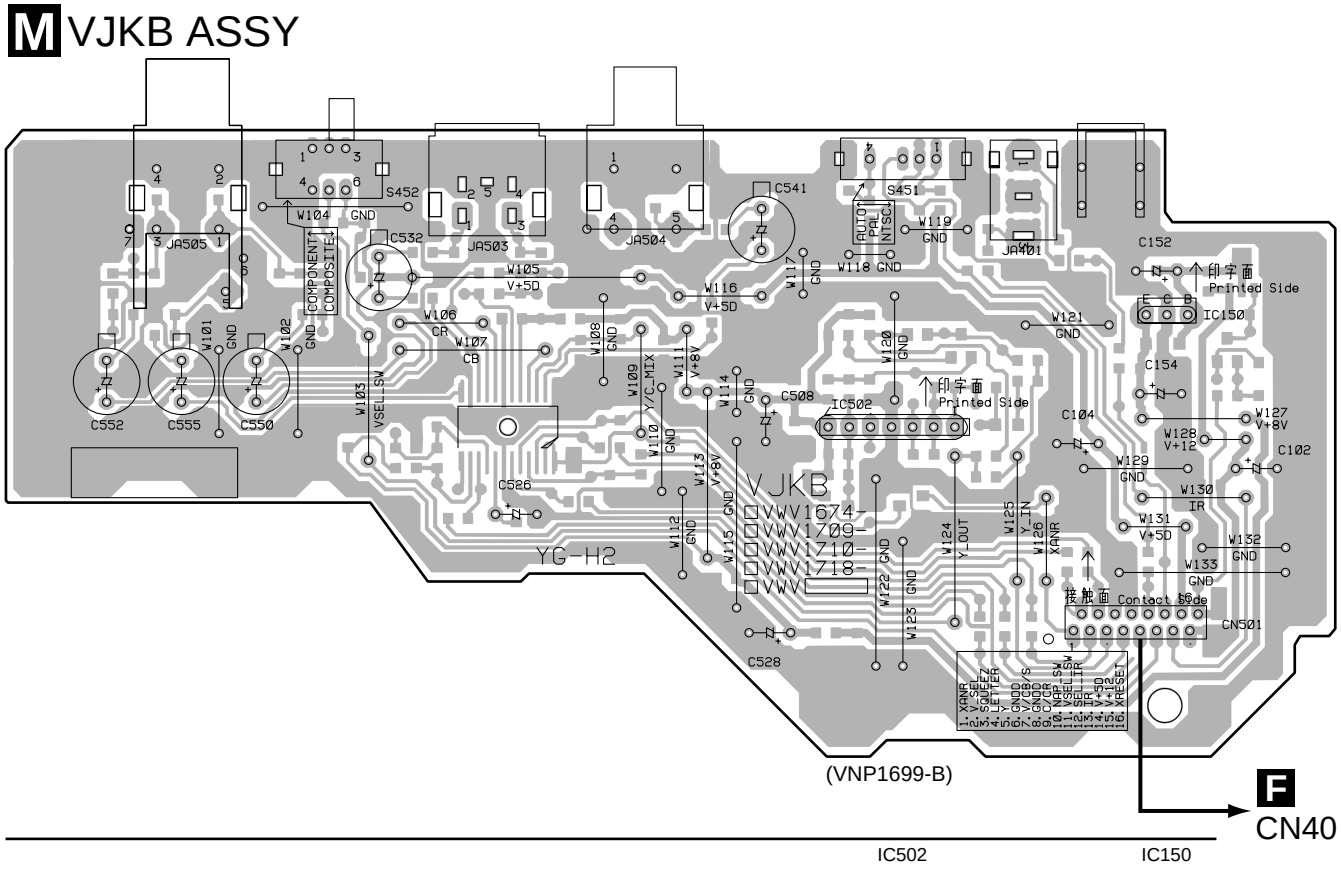


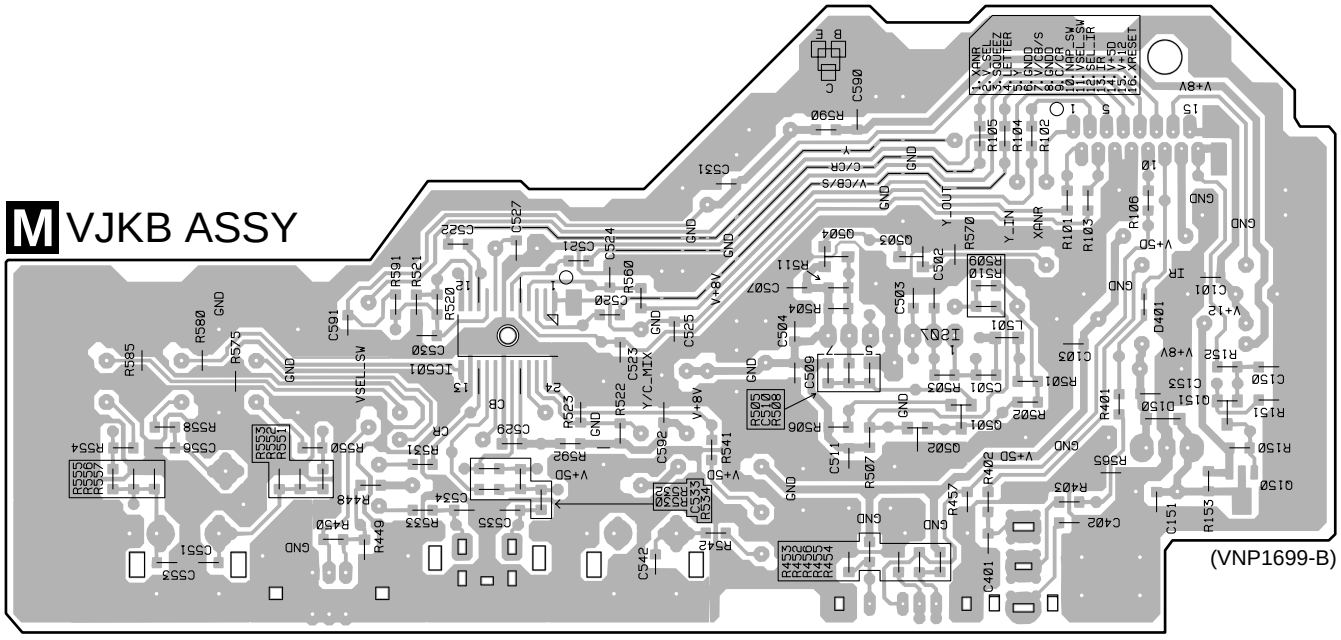
(VNP1698-B)

SIDE B

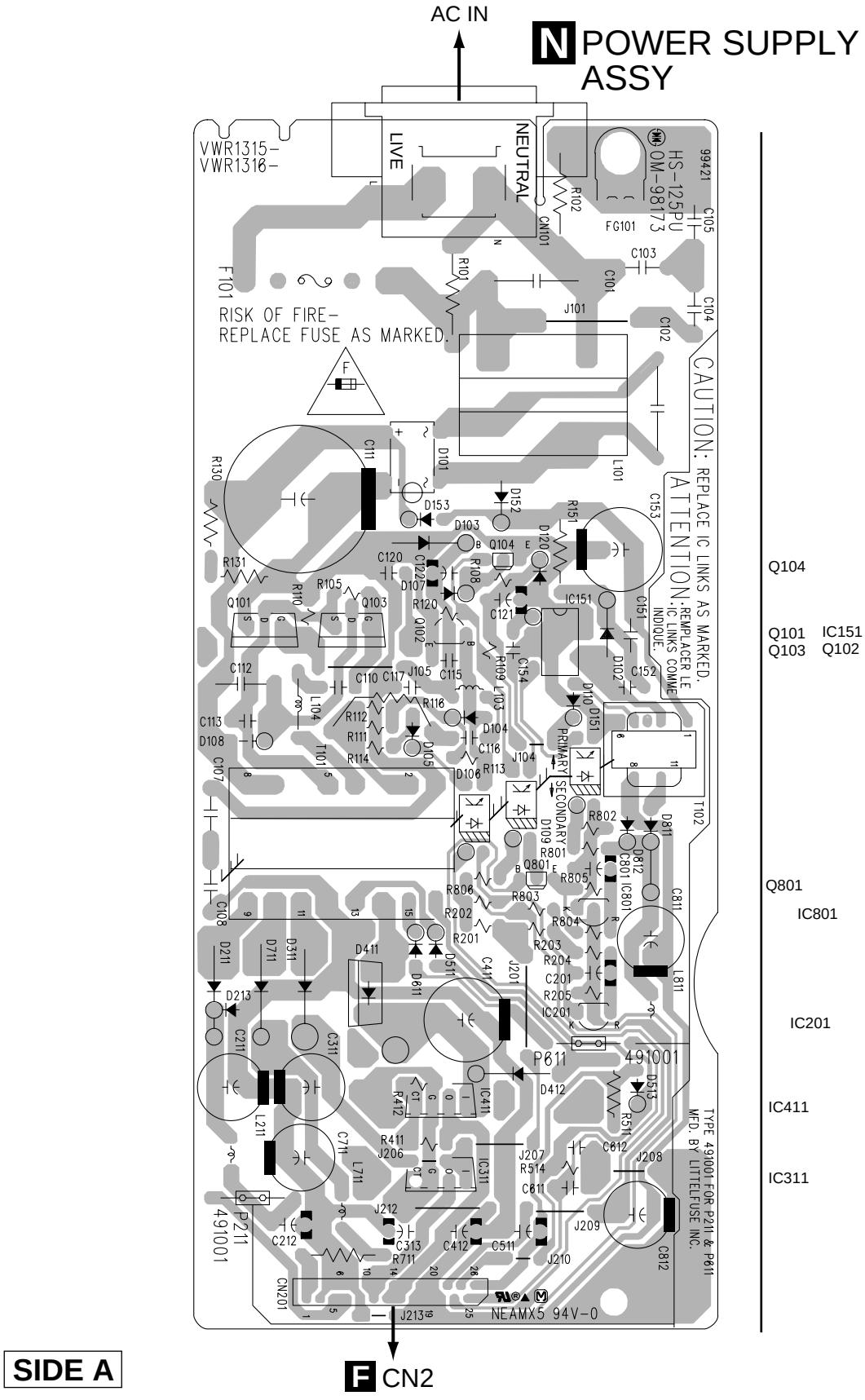
Q402 Q401 Q400 Q499 Q153 Q152 Q252

4.5 VJKB ASSY

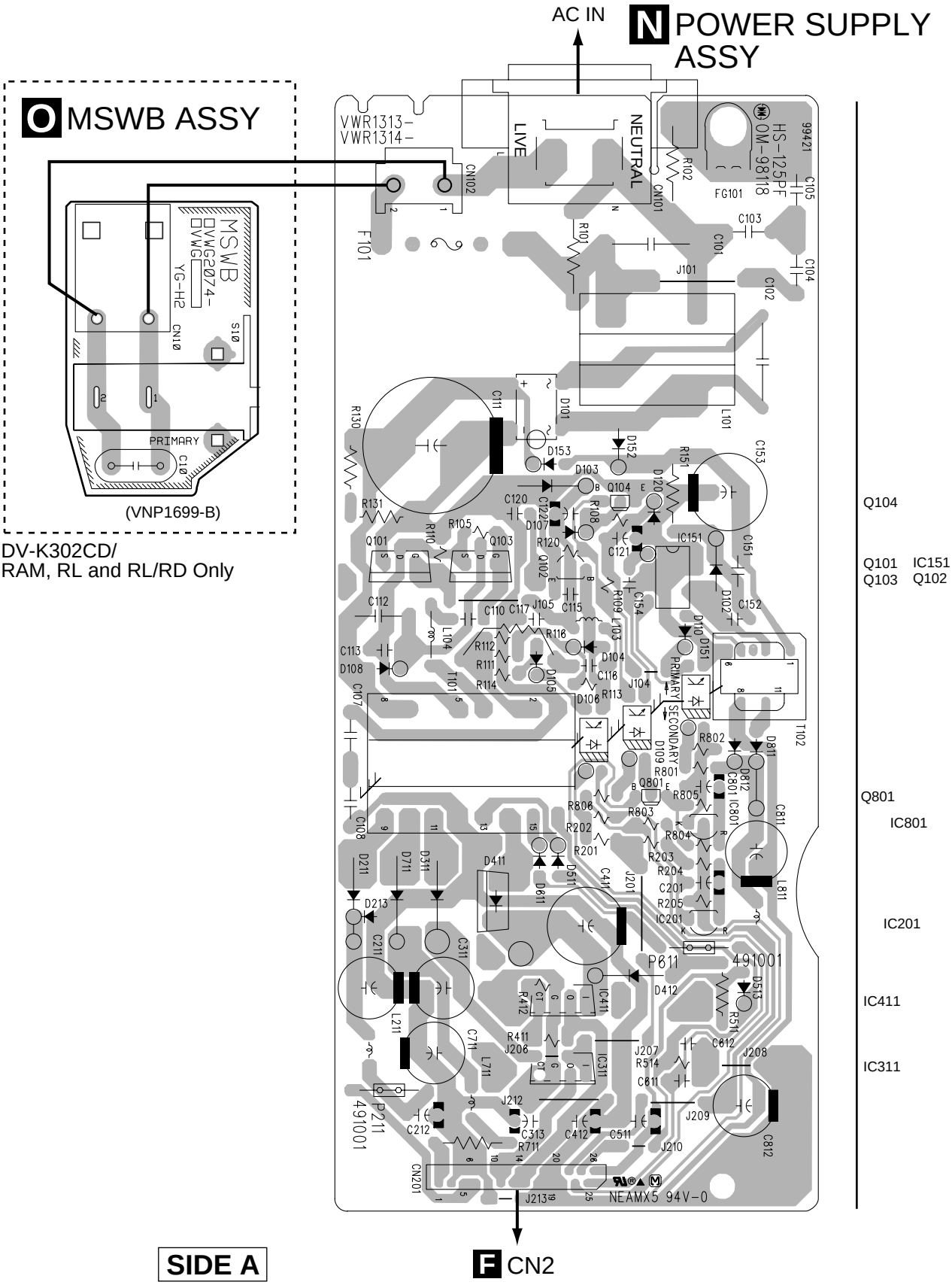

M VJKB ASSY
VJKB
YG-H2
(VNP1699-B)
F
CN40
IC502
IC150
SIDE A


M VJKB ASSY
(VNP1699-B)
IC501
Q504
Q503
Q502
Q501
Q151
SIDE B

4.6 POWER SUPPLY ASSY (For DV-C302D)



4.7 POWER SUPPLY and MSWB ASSYS (For DV-K302CD)



5. PCB PARTS LIST

NOTES: ●*Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
●*The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
●*When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).
560 Ω → 56 × 10¹ → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10³ → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K
Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62k Ω → 562 × 10¹ → 5621 ..... RN1/4PC 5 6 2 1 F

■LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No.					Remarks
		DV-C302D	DV-K302CD				
		KU/CA	RAMXQ	RD/RA	RL	RL/RD	
NSP	$M MECHA DVD ASSY	VWT1163	VWT1163	VWT1163	VWT1163	VWT1163	
NSP	├ MECHA ASSY	VWM1878	VWM1878	VWM1878	VWM1878	VWM1878	
NSP	│ ├ SW ASSY	VWG2002	VWG2002	VWG2002	VWG2002	VWG2002	
NSP	│ ├ TRADE ASSY	VWG2003	VWG2003	VWG2003	VWG2003	VWG2003	
NSP	│ └ MOTOR ASSY	VWG2004	VWG2004	VWG2004	VWG2004	VWG2004	
	└ TRAVERSE MECH ASSY-S	VXX2653	VXX2653	VXX2653	VXX2653	VXX2653	
NSP	├ SMEB ASSY	VWG2048	VWG2048	VWG2048	VWG2048	VWG2048	
NSP	└ FGSB ASSY	VWG2009	VWG2009	VWG2009	VWG2009	VWG2009	
	DVDM ASSY	VWS1390	VWS1391	VWS1391	VWS1391	VWS1391	
	AJKB ASSY	VWV1703	VWV1673	VWV1673	VWV1673	VWV1673	
	VJKB ASSY	VWV1710	Not used	VWV1709	Not used	Not used	
	VJSB ASSY	Not used	VWM1921	Not used	VWM1921	VWM1921	
	├ VJKB ASSY	Not used	VWV1674	Not used	VWV1674	VWV1674	
NSP	└ MSWB ASSY	Not used	VWG2074	Not used	VWG2074	VWG2074	
NSP	FRPB ASSY	VWM1929	VWM1924	VWM1926	VWM1923	VWM1923	
	├ FLKY ASSY	VWG2066	VWG2061	VWG2063	VWG2060	VWG2060	
NSP	├ KYLB ASSY	VWG2068	VWG2068	VWG2068	VWG2068	VWG2068	
NSP	├ PWSB ASSY	VWG2071	VWG2070	VWG2069	VWG2070	VWG2070	
	├ CNNB ASSY	VWG2072	Not used	Not used	Not used	Not used	
	└ MICB ASSY	Not used	VWV1723	VWV1679	VWV1723	VWV1723	
⚠	POWER SUPPLY ASSY	VWR1315	VWR1313	VWR1313	VWR1313	VWR1313	

■CONTRAST OF PCB ASSEMBLIES

F DVDM ASSY

VWS1390 and VWS1391 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		VWS1390	VWS1391	
	IC13	VYW1667	VYW1651	
	R3	Not used	RS1/16S103J	
	R4	RS1/16S103J	Not used	

G FLKY ASSY

VWG2066, VWG2061, VWG2063 and VWG2060 are constructed the same except for the following :

Mark	Symbol and Description	Part No.				Remarks
		VWG2066	VWG2061	VWG2063	VWG2060	
	Q102-Q105	Not used	PDTA124EK	PDTA124EK	PDTA124EK	
	D111,D115	Not used	MAY5064X	MAY5064X	MAY5064X	
	D112,D113	Not used	MPG5064X	MPG5064X	MPG5064X	
	C10	Not used	CEJA220M6R3	Not used	CEJA220M6R3	
	R108,R151	RS1/10S0R0J	Not used	Not used	Not used	
	R162	RS1/10S0R0J	Not used	RS1/10S0R0J	Not used	
	R109	RS1/10S103J	Not used	Not used	Not used	
	R111,R115	Not used	RS1/10S181J	RS1/10S181J	RS1/10S181J	
	R112,R113	Not used	RS1/10S121J	RS1/10S121J	RS1/10S121J	
	R125,R126,R160	Not used	RS1/10S102J	RS1/10S102J	RS1/10S102J	
	R141	RS1/10S123J	RS1/10S163J	RS1/10S273J	RS1/10S273J	
	R143	RS1/10S472J	RS1/10S272J	RS1/10S683J	RS1/10S683J	
	R150	Not used	RS1/10S0R0J	RS1/10S0R0J	RS1/10S0R0J	
	R157	Not used	RS1/10S301J	RS1/10S301J	RS1/10S301J	
	R158	Not used	RS1/10S431J	RS1/10S431J	RS1/10S431J	
	R161	Not used	RS1/10S0R0J	Not used	RS1/10S0R0J	
	R159	Not used	RS1/10S621J	RS1/10S621J	RS1/10S621J	
	S158-S161	Not used	ASG7013	ASG7013	ASG7013	
	FL HOLDER	VNF1087	VNF1096	VNF1087	VNF1087	

I PWSB ASSY

VWG2071, VWG2070 and VWG2069 are constructed the same except for the following :

Mark	Symbol and Description	Part No.			Remarks
		VWG2071	VWG2070	VWG2069	
	IC301	Not used	BA4560F	BA4560F	
	Q301	Not used	PDTA124EK	Not used	
	D301	Not used	SLR-343VC(NPQ)	Not used	
	D302	SLR-343DC(NPQ)	Not used	Not used	
	C301	Not used	CKSQYB224K16	CKSQYB224K16	
	C303	Not used	CCSQSL121J50	CCSQSL121J50	
	C304,C305	Not used	CKSQYB103K50	CKSQYB103K50	
	R301	Not used	RS1/10S751J	Not used	
	R302	RS1/10S181J	Not used	Not used	
	R303,R304	Not used	RS1/10S473J	RS1/10S473J	
	R305	Not used	RS1/10S683J	RS1/10S683J	
	R310	RS1/10S301J	Not used	Not used	
	R311	RS1/10S431J	Not used	Not used	
	R312	RS1/10S621J	Not used	Not used	
	R320	Not used	RS1/10S0R0J	RS1/10S0R0J	
	R331,R332	RS1/10S0R0J	Not used	Not used	
	VR301-VR303 Rotary volume (10k-B)	Not used	VCS1037	VCS1037	
	CN301 15P FFC CONNECTOR	Not used	VKN1275	VKN1275	
	CN303 9P FFC CONNECTOR	VKN1269	not used	not used	
	S302	ASG7013	Not use	ASG7013	
	S303-S305	ASG7013	Not usedd	Not used	

K MICB ASSY

VWV1679 and VWV1723 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		VWV1679	VWV1723	
	C413	Not used	CKSQYF104Z50	
	L406	Not used	VTF1096	
	R410,R9406	RS1/10S0R0J	Not used	
	R492	Not used	RS1/10S0R0J	

L AJKB ASSY

VWV1703 and VWV1673 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		VWV1703	VWV1673	
	IC101	Not used	TC74HCT7007AF	
	IC201	Not used	TC9409BF	
	IC251	Not used	TC7WH74FU	
	IC252	Not used	TC7SET08F	
	IC253,IC254	Not used	TC7S02F	
	IC271	Not used	TC74VHC157FT	
	Q132,Q252,Q400,Q408	Not used	DTC124EK	
	Q134,Q499	Not used	DTA124EK	
	Q401,Q411,Q442,Q461,Q492	Not used	2SD2114K	
	Q407	Not used	2SA1037K	
	Q421	Not used	2SC2412K	
	Q521,Q523,Q553,Q602,Q652	Not used	2SD2114K	
	D464	MA111	Not used	
	D640,D641	Not used	UDZS5.1B	
	L121,L201-L204,L251-L254,L271	Not used	VTF1096	
	C113,C302,C305	CEAT101M10	CEAT471M6R3	
	C121,C122,C202,C203,C205,C206	Not used	CKSQYF104Z25	
	C163	CEAT101M10	CEAT221M10	
	C201,C207,C209,C212,C215,C217	Not used	CEAT101M10	
	C204,C214,C216	Not used	CKSQYB103K50	
	C208,C211,C213,C251-C253,C255,C271,C272	Not used	CKSQYF104Z25	
	C218	Not used	CKSQYB562K50	
	C219	Not used	CKSQYB122K50	
	R100	RS1/10S0R0J	RS1/10S1R2J	
	R135,R250,R430,R499,R801	Not used	RS1/10S472J	
	R196,R197,R199,R201,R231,R232,R238	Not used	RS1/10S0R0J	
	R202-R204	Not used	RS1/10S101J	
	R205,R206,R209,R437,R438	Not used	RS1/10S103J	
	R208	Not used	RS1/10S203J	
	R212	Not used	RS1/10S682J	
	R253-R256,R802,R968,R969	Not used	RS1/10S0R0J	
	R271-R273	RS1/10S0R0J	Not used	
	R406,R456	Not used	RS1/10S303J	
	R407,R432,R445,R482,R495,R531,R561	Not used	RS1/10S102J	
	R408,R526	Not used	RS1/10S221J	
	R419,R469	RN1/10SE1202D	RN1/10SE8201D	
	R429	Not used	RS1/10S182J	
	R431,R444,R481,R494,R532,R562	Not used	RS1/10S471J	
	R524	Not used	RS1/10S123J	
	R525	Not used	RS1/10S302J	
	R608,R658	Not used	RS1/10S102J	
	R609,R659	Not used	RS1/10S471J	
	R640	Not used	RS1/10S273J	
	R1198,R1199,R1233	Not used	RS1/10S0R0J	
	R1309	RS1/10S0R0J	RS1/10S101J	
	S801	Not used	VSH1009	
	CN102 5P FFC CONNECTOR	Not used	52045-0545	

M VJKB ASSY

VWV1710, VWV1674 and VWV1709 are constructed the same except for the following :

Mark	Symbol and Description	Part No.			Remarks
		VWV1710	VWV1674	VWV1709	
	IC502	Not used	TA7302P	TA7302P	
	Q501,Q502	Not used	2PB709A	2PB709A	
	Q503	Not used	DTC114YK	DTC114YK	
	Q504	Not used	PDTA124EK	PDTA124EK	
	L501	Not used	LCTA470J2520	LCTA470J2520	
	C501	Not used	CCSQCH390J50	CCSQCH390J50	
	C502,C510	Not used	CKSQYB103K50	CKSQYB103K50	
	C503,C504,C507,C511	Not used	CKSQYF104Z25	CKSQYF104Z25	
	C508	Not used	CEAT101M10	CEAT101M10	
	R452	Not used	RS1/10S153J	RS1/10S153J	
	R453,R505	Not used	RS1/10S103J	RS1/10S103J	
	R455,R509,R522	RS1/10S0R0J	Not used	Not used	
	R456,R510	Not used	RS1/10S0R0J	RS1/10S0R0J	
	R501	Not used	RS1/10S681J	RS1/10S681J	
	R502	Not used	RN1/10SC68R0D	RN1/10SC68R0D	
	R503	Not used	RS1/10S152J	RS1/10S152J	
	R504	Not used	RS1/10S241J	RS1/10S241J	
	R506,R507	Not used	RS1/10S222J	RS1/10S222J	
	R508	Not used	RS1/10S223J	RS1/10S223J	
	S451	Not used	VSH1020	VSH1020	
	PC BOARD (VJSB)	VNP1699	Not used	VNP1699	

Mark	No.	Description	Part No.

Mark	No.	Description	Part No.

■ PCB PARTS LIST FOR DV-C302D/KU/CA UNLESS OTHERWISE NOTED

A SW ASSY

SWITCHESS

S9502	ASG7009
S9501	DSG1017

OTHERS

J9501 JUMPER WIRE 6P	D20PWY0610E

B TRADE ASSY

OTHERS

CN9501 6P JUMPER CONNECTOR	52147-0610
CN9002 FFC CONNECTOR 13P	SLW13R-1C7
CN9001 FFC CONNECTOR 8P	SLW8R-1C7

C MOTOR ASSY

SWITCH

S9503	ASG7009

OTHERS

J9502 JUMPER WIRE 4P	D20PWW0405E

D SMEB ASSY

SWITCH

S201	DSG1016

OTHERS

CN201 3P FFC CONNECTOR	52044-0345
CN202 8P FFC CONNECTOR	VKN1212
PC BOARD SMEB	VNP1695

E FGSB ASSY

SEMICONDUCTOR

PC101	TLP910(O)

RESISTORS

All Resistors	RS1/10S□□□J

Mark	No.	Description	Part No.
F	**DVDM ASSY**		
	SEMICONDUCTORS		
	IC21		CY2081SL-638
	IC1		LA9701M
	IC2		LC78652W
	IC3		M56788FP
	IC19		MB811171622A-100FN4
	IC18		MB86373
	IC16		MC74VHC541DT
	IC17		MC74VHCT541ADT
	IC15		MN414800CSJ-07
	IC5,IC7		NJM2100M
	IC11		PD3410A
	IC12		PD4995A
⚠	IC401		PQ2TZ15
	IC14		TC55V1001AF8
	IC23		TC7SH32FU
	IC8		TC7SHU04F
	IC13		VYW1667
	Q106,Q109,Q81-Q86		2SA1576A
	Q105,Q114,Q251		2SC4081
	Q102		HN1A01F
	Q103,Q281,Q6,Q7		HN1B04FU
	Q101		HN1C01F
	Q112,Q113		HN1C01FU
	Q108		HN1K03FU
	Q107		RN1902
	Q3		RN1911
	Q1		RN4982
	D302		KV1471E
	D6		RB501V-40
	D665,D666		RB521S-30
	COILS AND FILTERS		
	F8500		DTF1069
	F1		VTF1155
	L101,L150,L330		VTL1061
	L81		VTL1067
	L917		VTL1078
	L304		VTL1141
	CAPACITORS		
	C123,C145,C282,C613,C843		CCSRCH101J50
	C322		CCSRCH120J50
	C206,C210,C211		CCSRCH151J50
	C126,C333,C845		CCSRCH180J50
	C116,C151,C314		CCSRCH220J50
	C152		CCSRCH221J50
	C209		CCSRCH331J50
	C104-C108,C134,C236		CCSRCH470J50
	C122,C208		CCSRCH471J50
	C128,C335		CCSRCH560J50
	C127,C334		CCSRCH5R0C50
	C124,C146		CCSRCH680J50
	C117,C240,C352,C360		CCSRCH681J25
	C129,C142		CEV101M10
	C113,C139		CEV220M16
	C413,C700,C808		CEV221M4
	C111,C149,C205,C207,C401		CEV470M6R3
	C403,C407		CEV470M6R3
	C140,C223,C224,C252,C264		CKSQYB105K10
	C312,C801,C802,C807		CKSQYB105K10
	C809-C815,C817-C819		CKSQYB105K10
	C229		CKSQYB224K16
	C148,C217,C414		CKSQYF105Z16
	C216,C313,C337		CKSRYB102K50
	C133,C136,C203,C220,C225		CKSRYB103K50
	C239,C320,C321,C603,C625		CKSRYB103K50
	C703,C711		CKSRYB103K50
	C101,C102,C114,C118,C119		CKSRYB104K16
	C121,C138,C204,C212,C213		CKSRYB104K16
	C227,C228,C231,C263		CKSRYB104K16
	C315-C317,C332,C804		CKSRYB104K16
	C281,C354		CKSRYB222K50
	C153,C266		CKSRYB223K25
	C214,C251,C261		CKSRYB472K50
	C357		CKSRYB473K16
	C330		CKSRYB682K50
	C109,C110,C120,C130,C131		CKSRYF104Z16
	C143,C150,C202,C215		CKSRYF104Z16
	C221,C222,C226,C230,C235		CKSRYF104Z16
	C265,C319,C327,C359,C367		CKSRYF104Z16
	C369,C370,C402,C404,C406		CKSRYF104Z16
	C408,C410,C412,C415		CKSRYF104Z16
	C601,C602,C604-C612		CKSRYF104Z16
	C614,C615,C617-C624,C626		CKSRYF104Z16
	C701,C702,C704-C710		CKSRYF104Z16
	C712-C726,C831-C833		CKSRYF104Z16
	C837-C839		CKSRYF104Z16
	C820,C821 (2.2µF)		VCG1030
	C299,C844 (0.47µF)		VCG1032
	C368,C409,C411 (47µF/6.3V)		VCH1166
	C405 (330µF/6.3V)		VCH1191
	VC1 (30pF)		VCM1013
	RESISTORS		
	R123 (39Ω×4)		ACN7047
	R732,R733,R735,R736 (47Ω×4)		ACN7077
	R632 (100Ω×4)		DCN1092
	R608,R609,R613,R624,R627 (10kΩ×4)		DCN1094
	R629,R631,R633,R634,R638 (10kΩ×4)		DCN1094
	R654,R657,R658,R662,R664 (10kΩ×4)		DCN1094
	R706,R717,R718 (10kΩ×4)		DCN1094
	R121,R663,R841 (22Ω×4)		DCN1104
	R712,R715,R840 (0Ω×4)		DCN1106
	R1020,R162,R2010,R2020,R2030		RS1/10S0R0J
	R2040,R3050,R3520,R366,R4010		RS1/10S0R0J
	R4020,R4030,R4040,R4050,R4060		RS1/10S0R0J
	R667,R668,R671-R673		RS1/10S0R0J
	R675,R676,R685,R686,R722		RS1/10S0R0J
	R8000,R821,R8300,R8400		RS1/10S0R0J
	R903,R904,R927		RS1/10S0R0J
	R202		RS1/10S101J
	R700		RS1/10S1R2J
	R396		RS1/16S1001F
	R807		RS1/16S1201F
	R361,R364		RS1/16S1203F
	R825-R827		RS1/16S1600F
	R395		RS1/16S1801F
	R363,R365		RS1/16S1803F
	R805		RS1/16S2401F
	R397,R806,R808		RS1/16S2701F

Mark	No.	Description	Part No.
	R848-R850		RS1/16S4700F
	R164		RS1/16S5600F
	R391		RS1/16S5601F
	R394		RS1/16S6801F
	R3510		VCN1120
	Other Resistors		RS1/16S□□□J

OTHERS

X2	CHIP CERALOCK (20MHz)	DSS1110
	FLEXIBLE CABLE (7P)	VDA1681
CN6	7P FFC CONNECTOR	VKN1299
CN7	B TO B CONNECTOR 14P	VKN1324
CN4	24P FFC CONNECTOR	VKN1464
CN30	13P FFC CONNECTOR	VKN1472
CN10	15P FFC CONNECTOR	VKN1474
CN40	16P FFC CONNECTOR	VKN1475
CN2,CN50	26P FFC CONNECTOR	VKN1479
	BARCODE LABEL	VRW1773
X1	CRYSTAL (13.824MHz)	VSS1129

G FLKY ASSY

SEMICONDUCTORS

	IC101	PE5141A
	IC102	S-806D
	D171,D174,D177	SLR-343DC(NPQ)

SWITCHES

	S131-S140	ASG7013

CAPACITORS

	C105	CEJA470M10
	C119	CKSQYB103K50
	C104,C106,C114	CKSQYF104Z50

RESISTORS

	R121,R122	RN1/10SE1001D
	Other Resistors	RS1/10S□□□J

OTHERS

CN104	BOTTOM CONNECTOR	BTMK10S-1S
IR101	REMOTE RECEIVER UNIT	GP1U28X
V101	FL TUBE	VAW1050
	SPACER	VEC1599
CN101	15P FFC CONNECTOR	VKN1275
	FL HOLDER	VNF1087
X101	CERAMIC RESONATOR (5MHz)	VSS1142

H KYLB ASSY

SEMICONDUCTORS

	Q201	DTD113ES
	D201	MA111

SWITCHES

	S201-S211	ASG7013

RESISTORS

	Other Resistors	RS1/10S□□□J

Mark	No.	Description	Part No.

OTHERS

	CN201 FJ CONNECTOR 4P	04R-FJ
	PL201 LAMP(DVD ILLUMI.)	VEL1022

I PWSB ASSY

SEMICONDUCTOR

	D302	SLR-343DC(NPQ)

SWITCHES

	S300-S305	ASG7013

RESISTORS

	Other Resistors	RS1/10S□□□J

OTHERS

	CN302 FJ CONNECTOR 4P	04P-FJ
	CN303 9P FFC CONNECTOR	VKN1269

J CNNB ASSY (DV-C302D ONLY)

OTHERS

	CN501 BOTTOM CONNECTOR	BTMK10P-1R
	CN502 9P FFC CONNECTOR	VKN1269

K MICB ASSY (DV-K302CD/RD/RA)

SEMICONDUCTORS

	IC401	NJM2068M

CAPACITORS

	C405,C408	CCSQSL121J50
	C401,C402	CEJA470M10
	C403,C404,C406,C409	CKSQYB103K50
	C440,C441	CKSQYB105K10
	C412	CKSQYF104Z50

RESISTORS

	Other Resistors	RS1/10SS□□□J

OTHERS

CN402	BOTTOM CONNECTOR	52045-0545
CN401	5P FFC CONNECTOR	BTMK10P-1R
	PCB BINDER	DEF1012
JA403	HEADPHONE JACK	RKN1006
JA401,JA402	MIC JACK	VKN1147
CN403	15P FFC CONNECTOR	VKN1246
	SNAP PLATE	VNE1102
	JACK HOLDER	VNE2206

Mark	No.	Description	Part No.

L AJKB ASSY

SEMICONDUCTORS

	IC501,IC521,IC601	BA4560F
	IC151	IR3M03A
	IC401	NJM4556AM
	IC152	NJM78M08FA
	IC153	NJM79M08FA
	IC511	TC4W53F
	IC702	TC74HCU04AF
	IC701	TC7SET08F
	IC281	TC7W53FU
	IC301	UDA1328T/S1
	Q405,Q444,Q562,Q632	2SA1037K
	Q406,Q443,Q561,Q631	2SC2412K
	Q402,Q409,Q410,Q441	2SD2114K
	Q459,Q460,Q491,Q522,Q552	2SD2114K
	Q601,Q651	2SD2114K
	Q412	DTA124EK
	Q403,Q404	DTC124EK
	D151,D152	EP10QY03
	D464,D631	MA111

COILS AND FILTERS

	L151	LFA470J
	L1701	PTL1003
	L1701,L281,L301,L302	VTF1096
	L702,L703	VTF1096
	L152	VTL1118

CAPACITORS

	C156	CCSQCH181J50
	C522,C602,C652	CCSQCH221J50
	C402,C403,C452,C453,C523	CCSQCH330J50
	C603,C653	CCSQCH330J50
	C411,C412,C442,C461,C462	CCSQCH331J50
	C492,C531,C611,C661	CCSQCH331J50
	C401,C451	CCSQCH680J50
	C528,C608,C658	CEAT100M50
	C100,C102,C113,C163,C302	CEAT101M10
	C305,C308,C407,C703,C708	CEAT101M10
	C104,C155,C157,C414,C505	CEAT101M16
	C507,C555,C558,C706	CEAT101M16
	C501	CEAT1R0M50
	C415,C465,C551	CEAT220M25
	C500	CEV101M6R3
	C503,C508,C521,C601,C651	CFTYA104J50
	C709	CKSQYB103K50
	C307,C554	CKSQYB104K25
	C561	CKSQYB474K16
	C101,C103,C112,C152,C153	CKSQYF104Z25
	C158,C281,C282,C301	CKSQYF104Z25
	C303,C304,C306,C404,C406	CKSQYF104Z25
	C504,C506,C512,C513,C525	CKSQYF104Z25
	C527,C605,C607,C701,C702	CKSQYF104Z25
	C704,C705,C707,C711	CKSQYF104Z25

RESISTORS

	R419,R469	RN1/10SE1202D
	R409,R459,R505,R521,R601	RN1/10SE1602D
	R651	RN1/10SE1602D
	R156	RN1/10SE1801D
	R159	RN1/10SE2200D
	R401-R404,R451-R454	RN1/10SE2202D
	R553	RN1/10SE3301D
	R507,R523,R603,R653	RN1/10SE3302D
	R405,R455	RN1/10SE4702D
	R501-R503,R506	RN1/10SE5602D
	R504	RN1/10SK1103D
	Other Resistors	RS1/10SX□□□J

OTHERS

	JA701	OPTICAL LINK OUT	GP1F32T
	JA702	1P PIN JACK (NI,BLK)	VKB1077
	JA501	4P PIN JACK	VKB1126
	JA401	6P PIN JACK	VKB1130
	CN101	26P FFC CONNECTOR	VKN1257
		SCREW PLATE	VNE1948
	KN101-KN103		VNF1084
		EARTH METAL FITTING	
		PC BOARD (AJKB)	VNP1698

M VJKB ASSY

SEMICONDUCTORS

	IC501	LA7137M
	IC150	NJM78M08FA
	D401	MA111

SWITCH

	S452	VSH1009

CAPACITORS

	C401,C523-C525	CCSQCH470J50
	C104,C154,C526,C528	CEAT101M10
	C102,C152	CEAT101M16
	C532,C541,C550,C552,C555	CEAT471M6R3
	C520-C522,C533	CKSQYB104K25
	C101,C103,C151,C153,C402	CKSQYF104Z25
	C527,C529,C530,C590-C592	CKSQYF104Z25
	C531	CKSQYF105Z16

RESISTORS

	R533,R534,R542,R558	RN1/10SC62R0D
	R550,R554	RN1/10SE1100D
	R552,R556	RN1/10SE3300D
	R553,R557	RN1/10SE4700D
	Other Resistors	RS1/10S□□□J

OTHERS

	JA503	4P MINI DIN SOCKET	AKP7008
	JA401	REMOTE CONTROL JACK	RKN1004
	JA505	3P PIN JACK	VKB1105
	JA504	1P PIN JACK	VKB1122
	CN501	16P FFC CONNECTOR	VKN1247
		SCREW PLATE	VNE1948
		PC BOARD (VJSB)	VNP1699

Mark	No.	Description	Part No.

N POWER SUPPLY ASSY (VWR1315) (FOR DV-C302D)

SEMICONDUCTORS

⚠	IC201,IC801		AN1431T
⚠	IC311		VZF1078
⚠	IC411		VZF1074
⚠	Q101,Q103		VZF1062
⚠	Q102		2SC3377
⚠	Q104		2SC1740S
⚠	D102		EG01C
⚠	D213		MTZJ15B
⚠	D104		MTZJ2.4B
⚠	D812		MTZJ6.8B
⚠	D513		MTZJ8.2B
⚠	D101		VZF1044
⚠	D108		VZF1045
⚠	D811		VZF1054
⚠	D211,D711		VZF1065
⚠	D411		VZF1075
⚠	D311		VZF1076
⚠	D103		VZF1077
⚠	D105,D107,D110,D514		1SS270A
⚠	D511		10ELS2
⚠	D106,D109,D151		VZF1071

RESISTORS

⚠	R511 (10Ω)		VZC1057
⚠	R611 (33Ω)		VZC1060
⚠	R711 (0.51Ω, 1/2W)		VZC1061

OTHERS

⚠	F101	FUSE (2A/125V)	REK1078
⚠	P211	FUSE (1A/60V)	VEK1041

N POWER SUPPLY ASSY (VWR1313) (FOR DV-K302CD)

SEMICONDUCTORS

⚠	IC201,IC801		AN1431T
⚠	IC311		VZF1078
⚠	IC411		VZF1074
⚠	Q101,Q103		VZF1062
⚠	Q102		2SC3377
⚠	Q104		2SC1740S
⚠	D102		EG01C
⚠	D213		MTZJ15B
⚠	D104		MTZJ2.4B
⚠	D812		MTZJ6.8B
⚠	D513		MTZJ8.2B
⚠	D101		VZF1044
⚠	D108		VZF1045
⚠	D811		VZF1054
⚠	D211,D711		VZF1065
⚠	D411		VZF1075
⚠	D311		VZF1076
⚠	D103		VZF1077
⚠	D105,D107,D110,D514		1SS270A
⚠	D511		10ELS2
⚠	D106,D109,D151		VZF1071

RESISTORS

⚠	R511 (10Ω)		VZC1057
⚠	R611 (33Ω)		VZC1060
⚠	R711 (0.51Ω, 1/2W)		VZC1061

OTHERS

⚠	F101	FUSE (2A/250V)	VEK1049
⚠	P211	FUSE (1A/60V)	VEK1041

O MSWB ASSY (DV-K302CD/RAMXQ, RL and RL/RD Types Only)

SWITCH

⚠	S10		ASG1006

OTHERS

	CN10	AMP U-P CONNECTOR 2P	2-178496-4

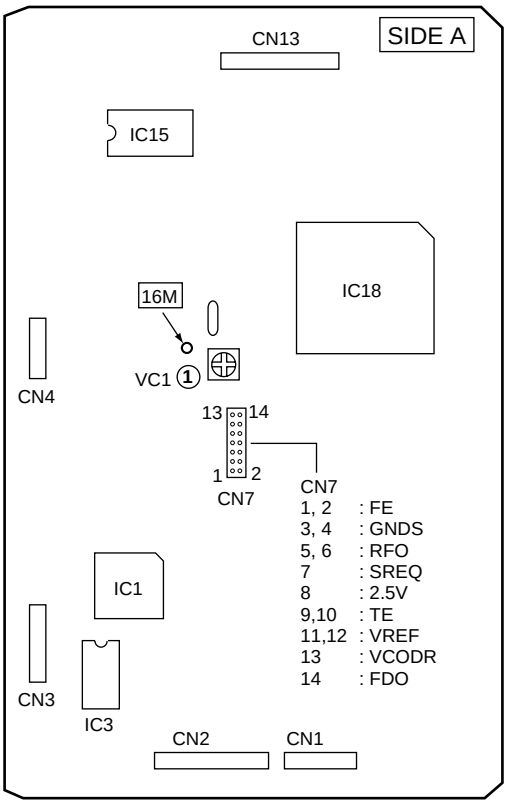
6. ADJUSTMENT

6.1 ADJUSTMENT ITEMS AND LOCATION

Note : When the Traverse mechanism adjustment is not properly adjusted, jitter, error rate and play ability are defective. The noise may come out by the case.

■ Adjustment Points (PCB Part)

DVDM ASSY

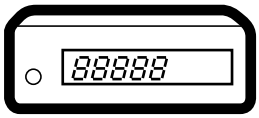


■ Adjustment Items

[Electrical Part]

① Master Clock Adjustment

6.2 JIGS AND MEASURING INSTRUMENTS



Frequency counter
Display digit ≥ 8-digit

⊖ Screwdriver (small)

6.3 NECESSARY ADJUSTMENT POINTS

When → Adjustment Points

■ EXCHANGE PCB ASSY

Exchange board
AJKB and VJKB ASSYS

→ **Mechanical point** _____

→ **Electric point** _____

Exchange board
DVDM ASSY

→ **Mechanical point** _____

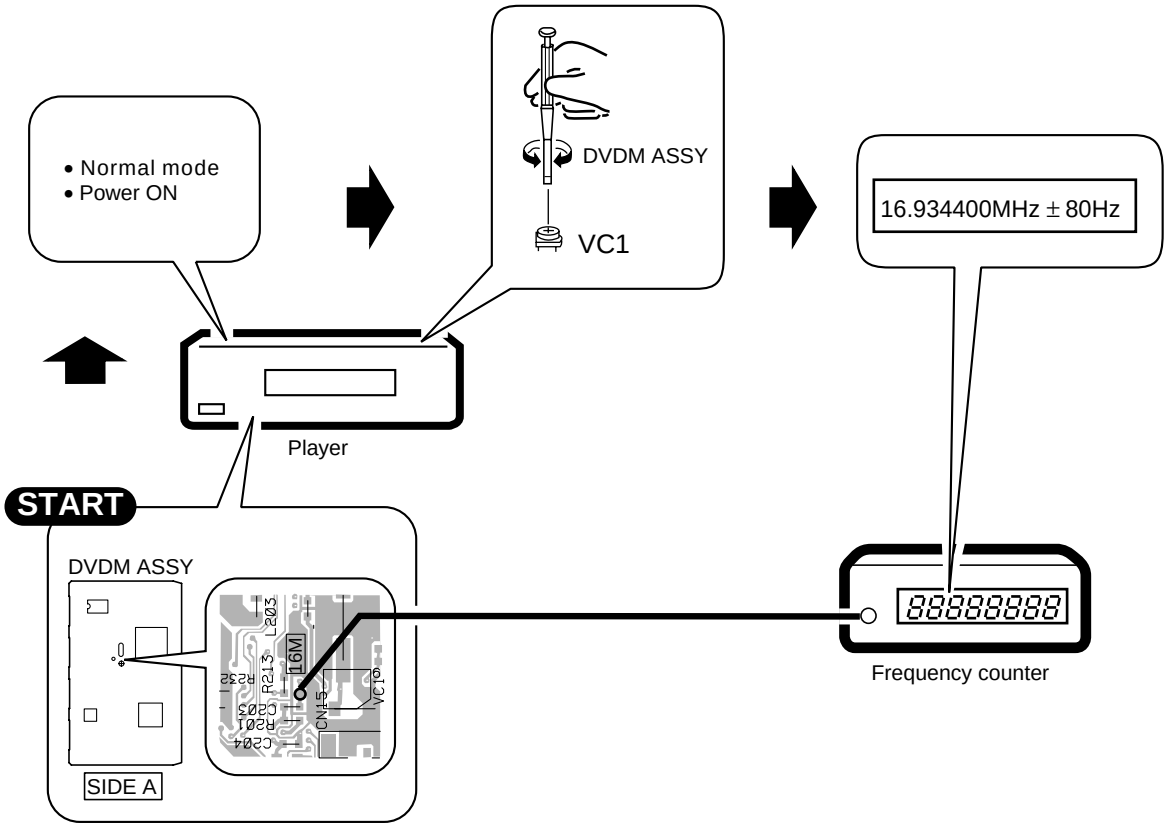
→ **Electric point** _____

Note : ① is adjusted already.

6.4 ELECTRICAL ADJUSTMENT

① Master Clock Adjustment

• When not properly adjusted : Uneven color



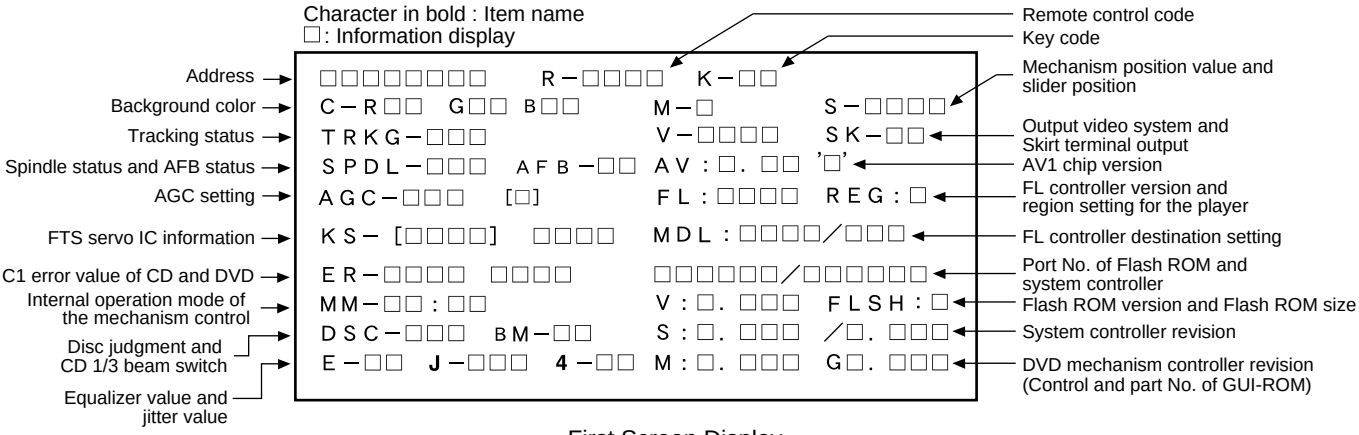
7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TEST MODE SCREEN DISPLAY

Consecutive double-OSD display is supported during test mode. The screen is composed 10 lines with a maximum of 32 characters per line. It can't be used with the debugging display mode together.

• Screen Composition


Character in bold : Item name
□: Information display
Address
Background color
Tracking status
Spindle status and AFB status
AGC setting
FTS servo IC information
C1 error value of CD and DVD
Internal operation mode of the mechanism control
Disc judgment and CD 1/3 beam switch
Equalizer value and jitter value
□□□□□□□□ R－□□□□ K－□□
C－R□□ G□□ B□□ M－□ S－□□□□
TRKG－□□□ V－□□□□ SK－□□
SPDL－□□□ AFB－□□ AV：□. □□ '□'
AGC－□□□ [□] FL：□□□□ REG：□
KS－ [□□□□] □□□□ MDL：□□□□／□□□
ER－□□□□ □□□□ □□□□□□／□□□□□□
MM－□□：□□ V：□. □□□ FLSH：□
DSC－□□□ BM－□□ S：□. □□□ ／□. □□□
E－□□ J－□□□ 4－□□ M：□. □□□ G□. □□□
Remote control code
Key code
Mechanism position value and slider position
Output video system and Skirt terminal output
AV1 chip version
FL controller version and region setting for the player
FL controller destination setting
Port No. of Flash ROM and system controller
Flash ROM version and Flash ROM size
System controller revision
DVD mechanism controller revision (Control and part No. of GUI-ROM)

First Screen Display

Caution :
The first screen and second screen switch by pressing [DISPLAY] key of the remote control unit.
It is only a version display part on the lower right of the screen those contents of display change.
ATB : ON/OFF information display and AGC manual setting display deleted with the second generation.
The displays of Tilt error value, Tilt servo status and pickup DVD/CLD display deleted with the third generation becomes LD part is deleted.

• Description of Each Item on the Display

(1) Address indication

The address being traced is displayed in number.

DVD : ID indication (hexadecimal number, 8 digits) [＊＊＊＊＊＊＊＊]
CD : A-TIME (min. sec.) [0 0 0 0 ＊＊＊＊]

(Note : For DVDs, decimal-number indication is possible.)

(2) Code indication of the remote control unit [R – ＊＊＊＊]

The code for the key pressed on the remote control unit, which is received by the FL controller, is displayed while the key is pressed. In the case of the double code, the second code will be displayed.

(3) Key code indication for the main unit [K – ＊＊]

The code for the key pressed on the main unit, which is received by the system controller, is displayed while the key is pressed.

(4) Background color indication [C – R＊＊ G＊＊ B＊＊]

(5) Tracking status [TRKG – ＊＊＊]

Tracking on	[ON]
Tracking off	[OFF]

(6) ① Spindle status [SPDL – ＊＊＊]

Spindle accelerator and brake, free-runnimg	[A/B]
FG servo	[FG]
Rough, velocity phase servo	[SRV]
Offset addition, rough, velocity phase servo	[O_S]

② AFB status [AFB – ＊＊]

ON	[ON]
OFF	[OFF]

(7) Mechanism position value [M – ＊]

Position code	[1] to [3]

(8) Slider position [S – ＊＊＊＊]

CD TOC area	[IN]
CD active area	[CD]

(9) AGC setting [AGC – ＊＊]

AGC on	[AGC-ON]
AGC off	[AGC-OFF]

(10) Output video system [V – ＊＊＊＊]

NTSC system	[NTSC]
PAL system	[PAL]
Auto-setting	[AUTO]

Skirt terminal output [SK – ＊＊]

VIDEO	[00]
S-VIDEO	[01]
RGB	[02]

＊: Display only the model which can do the output setting of skirt terminal.

(11) FTS servo IC information

DSP coefficient indication [KS – [＊＊＊＊] ＊＊＊＊]
Displays the address (four digits) of the specified coefficient and the setting value (four digits) with [TEST] and [9] keys.

(12) Error rate indication

① C1 error value of CD [ER – C1 ＊＊＊＊]
② C1 error value of DVD [ER – ＊＊＊＊ ＊＊＊＊]

(13) Internal operation mode of mechanism controller [MM – ＊＊ : ＊＊]

Internal mechanism mode (2 digits) and internal mechanism step (2 digits) of the mechanism controller

(14) ① Disk sensing [DSC – ＊＊＊]

The type of discs loaded is displayed.
[DVD], [CD], [VCD], [ ]

② CD 1/3 beam switch [BM – ＊＊]

(15) ① Equalizer value [E – ＊＊]

② Jitter value [J – ＊＊]

nake the jitter four times, and renew it in every one second.
[4 – ＊＊]
CD is effective only in the jitter value.

(16) Version of the AV-1 chip [AV : ＊.＊＊' ＊']

(17) ① Version of the FL controller [FL : ＊＊＊＊]

② Region setting of the player [REG : ＊]

Setting value [1] to [6]

(18) Destination setting of the FL controller [MDL : ＊＊＊＊ / ＊＊＊]

For charactors in front represent the type of model :
There charactors that follow represent the destination code.
J : /J, K : /KU, /KC, /KU/KC, R : /RAM, /RL, /RD, /LB,
WY : /WY

(19) The part number of the flash ROM and system controller [＊＊＊＊＊＊ / ＊＊＊＊＊＊＊]

① Part number of the flash ROM <Front>
(Example) VYW1536-A → W1536A
(Example) PD6256A9 → 6256A9
② Part number of the system controller <Rear>
(Example) PD3381T1 → 3381T1

(20) ① Version of the flash ROM [V : ＊.＊＊＊]

② Flash ROM size [FLSH = ＊]

(21) Revision of the system controller [S : ＊.＊＊＊ / ＊.＊＊]

① Revision number of the external ROM part (flash ROM) of the system controller <Front>
② Revision of the internal ROM part of the system controller <Rear>

(22) Revision of the DVD mechanism controller [M : ＊.＊＊＊]

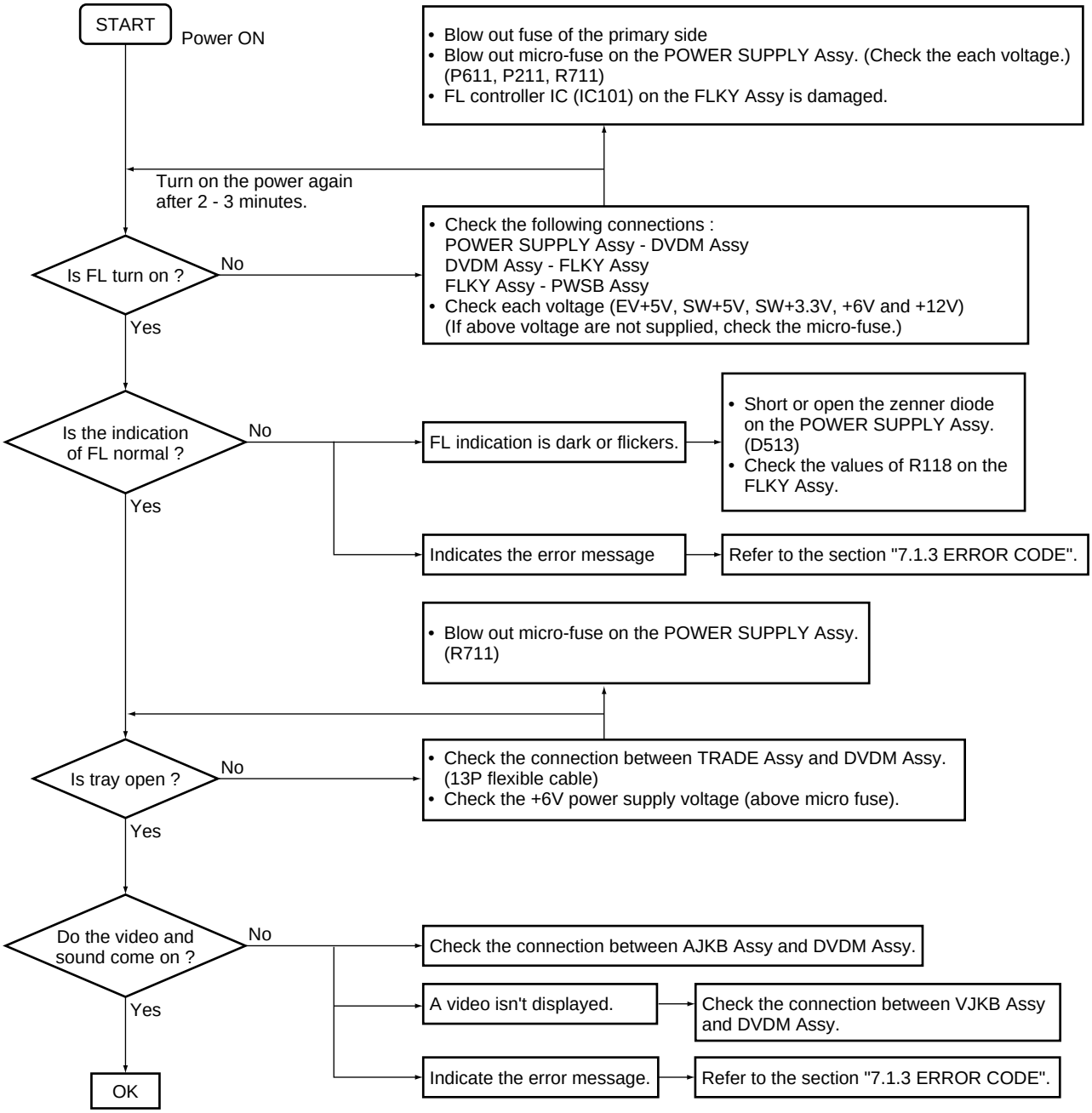
Revision number of the external ROM part (flash ROM) of the DVD mechanism controller

(23) Control and part numbers of the GUI-ROM [GUI : ＊＊＊＊]

No GUI model displays as "—— / ——".
OEM model displays the part number of GUI-ROM [GUI : ＊＊＊＊]

7.1.2 TROUBLE SHOOTING

- No Power ON
- FL is not turned ON
- FL indication is unusual


START
Power ON
• Blow out fuse of the primary side
• Blow out micro-fuse on the POWER SUPPLY Assy. (Check the each voltage.) (P611, P211, R711)
• FL controller IC (IC101) on the FLKY Assy is damaged.
Turn on the power again after 2 - 3 minutes.
Is FL turn on ?
No
• Check the following connections : POWER SUPPLY Assy - DVDM Assy DVDM Assy - FLKY Assy FLKY Assy - PWSB Assy
• Check each voltage (EV+5V, SW+5V, SW+3.3V, +6V and +12V) (If above voltage are not supplied, check the micro-fuse.)
Yes
Is the indication of FL normal ?
No
FL indication is dark or flickers.
• Short or open the zenner diode on the POWER SUPPLY Assy. (D513)
• Check the values of R118 on the FLKY Assy.
Yes
Indicates the error message
Refer to the section "7.1.3 ERROR CODE".
• Blow out micro-fuse on the POWER SUPPLY Assy. (R711)
Is tray open ?
No
• Check the connection between TRADE Assy and DVDM Assy. (13P flexible cable)
• Check the +6V power supply voltage (above micro fuse).
Yes
Do the video and sound come on ?
No
Check the connection between AJKB Assy and DVDM Assy.
A video isn't displayed.
Check the connection between VJKB Assy and DVDM Assy.
Yes
Indicate the error message.
Refer to the section "7.1.3 ERROR CODE".
OK

7.1.3 ERROR CODE

Error codes that are displayed on the FL display without using the remote control unit

FL Display	Possible causes	Operation of the unit
AV1 VER	AV-1 chip is not a match with the program of system controller	The sound may not out with the specific audio.
CPU AERR	CPU address error (Hardware is unusual.)	No operation
DMA AERR	DMA address error (Hardware is unusual.)	No operation
FLASH ID	Difference in versions of the internal ROM of the system controller and of the flash ROM, or bus line failure or reverse installation	No operation
FLASH WRP	Write protect error of the flash ROM	No operation
FLASH SIG	Difference in part number of the flash ROM (When the ROM which could't be used was used.)	No operation
FLASH SUM	Check sum error of the flash ROM (It exceeds the regular size.) or reverse installation (Hardware is unusual.)	No operation
FLASH SIZE	Size error of the flash ROM (Use 4 or 8 M-bit.)	No operation
ILLGAL	The system controller fetched a code other than an operation code (Hardware is unusual.)	No operation
RESERVE	Undefined interrupt (Hardware is unusual.)	No operation
SLOT	Inappropriate slot command issued (Hardware is unusual.)	No operation

Error codes that are displayed on the FL display by using the remote control unit (Mechanism controller error)
To display: ESC + DISPLAY + DISPLAY; Location of the display: At the two digits of center of the FL display
To display the error history: ESC + DISPLAY + One shot; Location of the display: TV screen

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
11	Search timeout	Search could not be complete within 7 seconds.	Search could not be complete within 7 seconds, and it could not enter the target area within 7 seconds by VCD scan.	CD : Stops, DVD: Continues operation
12	Search retry error	A search could not be completed after 3 retries, search backup was executed 4 times, or in a case of timeout (6 seconds) while the unit was tracing 11 tracks or more beyond the target while the search operation was converging.	Backup against slider skip was executed 4 times during a search, or slider skip twice resulted in starting from the read-in point.	CD: Stops, DVD: Continues operation
19	Tracing timeout while converging	Timeout (10.5 seconds) while tracing at the stage of convergence of a search.		Stop
1B	Index 0 search error		During Track (Index) Search, the search for the beginning of a program could not be completed within 3 seconds (20 seconds in the case of Index Search) after positioning based on the TOC data was completed.	Stop
22	Timeout of slider inner circumference	Inside switch could not ON within 3 seconds.		Stop
23	Timeout of slider outer circumference	Inside switch could not OFF within 2 seconds.		Stop
33	No FOK pulse during playback CLVA	When the focus was deviated continuously 20 times.		Adjusts focus at the innermost circumference and tries to return to its position where the error was generated (for 3 times),then opens. If the same error persists after one retry, the tray opens. (No FOK pulse)
38	Disc-type-sensing error	If normal starting was impossible in the following three cases, disc-type sensing will be retried if other errors occure excepting C5 error. However, when the focus error "33" was occured continuously 3 times, it is finished as "38 error" at the moment: (1) startup with the first disc-type-sensing result, (2) forced startup with another disc by designating the disc type, (3) forced startup with the original disc by designating the disc type.		Open

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
39	SGC converge timeout	SGC could not converge during detects the peak		Open
41	Spindle timeout	The unit did not enter Stop mode within 10 seconds of issuance of a Stop command.		Stop
48	Spindle FG transition timeout	The spindle could not converge into within ± 12% of the target FG rotation speed within 10 seconds after spindle kick. The first time after startup (the first time after disc distinction), it doesn't become the number of the target rotation within five seconds. The first time after startup, detects the abnormal rotation number of high-speed continuously 3 loops. DVD: 5 to 9 mS , CD: 40 to 60 mS		Stops. (FG timeout)
49	Spindle PLL transition timeout	After the second times after startup, it doesn't become the number of the target rotation within five seconds. Detects the abnormal high-speed or low-speed rotations. DVD: 5 to 9 mS , CD: 40 to 60 mS		Stops. ("73" is displayed during starting process.)
4A	Spindle lock timeout	Spindle could not lock more than 1.5 seconds before start the AFB.		Stops. ("73" is displayed during starting process.)
51	Auto sequence timeout of peak detection	ABUSY did not return within 1 second after the DDTCT (peak detection) command was sent.		Stop
52	Auto sequence timeout of focus jump down	ABUSY did not return within 30 mS after the FJMPD (Focus jump 1 to 0) command was sent.		Stop
53	Auto sequence timeout of focus jump up	ABUSY did not return within 30 mS after the FJMPU (Focus jump 0 to 1) command was sent.		Stop
54	Auto sequence timeout of play AGC	ABUSY did not return within 50 mS after the GSUMON (play-AGC-measuring) command was sent.		Stop
55	Auto sequence timeout of disc-type-sensing	ABUSY did not return within 2 seconds after the DJSRT (disc-sensing) command was sent.		Stop
56	Auto sequence timeout of ATB2	ABUSY did not return within 1 second after the TBLOFS (Internal ATB after the completion of external ATB) command was sent.		Stop
57	Auto sequence timeout of tracking servo ON	ABUSY did not return within 500 mS after the TSON (tracking servo ON) command was sent.		Stop
58	Auto sequence timeout of ATB1	ABUSY did not return within 200 mS after the TBL (external ATB) command was sent.		Stop
59	Auto sequence timeout of focus gain adjustment	ABUSY did not return within 2 seconds after the FGN (focus gain adjustment) command was sent.		Stop
5A	Auto sequence timeout of tracking gain adjustment	ABUSY did not return within 2 seconds after TGN (tracking gain adjustment) command was sent.		Stop
5B	Auto sequence timeout of offset adjustment	ABUSY did not return within 1 second after the CMDAVE (offset adjustment) command was sent.		Stop
5C	Auto sequence timeout of modulation factor measurement	ABUSY did not return within 200 mS after the ADJMIR (modulation factor measurement) command was sent.		Stop
5D	Auto sequence timeout of auto focus bias	ABUSY did not return within 2 seconds after the AFB (auto focus bias) command was sent.		Stop
5F	Auto sequence already busy	A command could not be sent because ABUSY was low. ABUSY did not return within 200 mS after TLV command was sent.		Stop
62	Pause retry error	Pause mode could not be restored within three retries after it had been released.		Continues operation

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
71	ID can not read during tracing	An ID could not be read for 1 second or more.		Stop
72	Subcode check failure during playback		No frame could be read for 3 seconds or more.	Stop
73	ID can not read at the startup	An ID could not be read within 1 second after the AFB adjustment had been finished.		Opens (ID readout failure)
74	Subcode check failure during startup		No subcode could be read within 3 seconds after AFB adjustment had been finished.	Opens (Subcode readout failure).
81	Timeout for reading TOC of the mechanism controller		TOC readout took 30 seconds or more.	Stop
82	Timeout for reading TOC of the system controller		Reading TOC of the system controller took 30 seconds or more.	Stop
97	Switching error at currousel loading	Clamping could not be completed during loading.		Retry clamp operation
9A	Stop error of currousel tray	Currousel tray rotation could not be completed within 10 seconds.		Stop
9B	Push error of currousel tray	Push in the tray from the loading tray open state.		Close the tray
9C	Pull error of currousel tray	Pull out the tray from the loading tray close state.		Open the tray
9D	Stop error of currousel loading tray	Loading tray movement could not be completed within 10 seconds.		Open the tray
9E	Abnormal error of currousel switch	Tray switch error was detected with the currousel tray.		Stop (Initialize the mechanism in the mechanism controller.)
9F	Currousel initialize error	Initialization could not be achieved with the currousel tray.		Turn off the power instantly (no indication on the FL display and no writing to flash memory.)
A1	Communication timeout of DSP command	A command could not be issued to DSP because Command Busy (XCBUSY) was in force (XCBUSY = L) for a specified time (about 200 µS).		No operation
A2	Communication timeout for reading DSP coefficient	Command Busy (XCBUSY) was in force for a specified time (about 200 µS) before and after a coefficient read command was issued to DSP, or the address echo-back after command issuance did not match the setup address.		No operation
A3	Communication timeout for writing DSP coefficient	Command Busy (XCBUSY) was in force for a specified time (about 1024 mS) before and after the coefficient write command was issued to DSP.		No operation
A4	Communication timeout for continuously writing DSP coefficient	Command Busy (XCBUSY) was in force for 200 µS during continuous coefficient writing, or before and after a continuous write command was issued to DSP.		No operation
B1	Timeout error for backup	In the tracing state during the backup sequence, codes could not be read for 1 second or more. In the backup sequence, tracking ON sequence of the servo DSP could not be completed even if more than 500 mS after the tracking ON command was issued.		Stops
B2	Retry error for backup	Tracing impossible after retring the tracking ON for 3 times in the backup sequence.		Stops
B3	Retry error for trace	During tracing, runaway was detected after three iterations of backup operations for detecting runaway.		Stops
C3	Detection of tracking overcurrent	During playback, the overcurrent detection port was at L for 300 ms or more continuously.		Stops (the mechanical controller operates independently).

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
(C5)	Short-circuit test corresponding error	While the power was on, the overcurrent detection port was at L for 40 ms or more continuously.		Turns off the power instantly (No indication on the FL display and no writing to flash memory)
E3	Violation against digital copy guard			Stops
F5	Tray being pushed	The tray switch that had been Open mode was forcibly changed to a mode other than Open by an external force.		Closes
F8	Loading timeout	Loading, unloading or clamping could not be completed within a specified time (about 5 seconds).		Reverses the loading direction. It timeout is repeated upon retry, the unit stops.
FC	Focus	The following error occured eight times. (1) Focus ON sequence could not be completed even if more than two seconds after the focus ON command (to the servo DSP) was sent. (2) Focus IN sequence was finished, actually focus IN was not completed.		Stops wherever possible then opens (stops in the case of side B).

Error codes that are displayed on the FL display by using the remote control unit (Device error)

To display: ESC + DISPLAY + DISPLAY; Location of the display: At the two digits of left of the FL display

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
bit3=1 08 etc.	AV1 access error (read, write NG)			No operation or it becomes debugging indication if the power is able to ON.
bit2=1 04 etc.	MY CHIP access error			
bit1=1 01 etc.	SRAM access error			

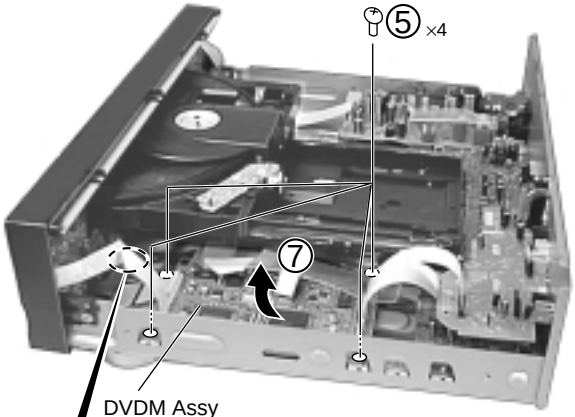
7.1.4 DISASSEMBLY (for DV-C302D)

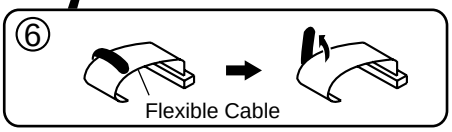
Note: Disassembly of the DV-K302CD is the same as that of the DV-C302D.

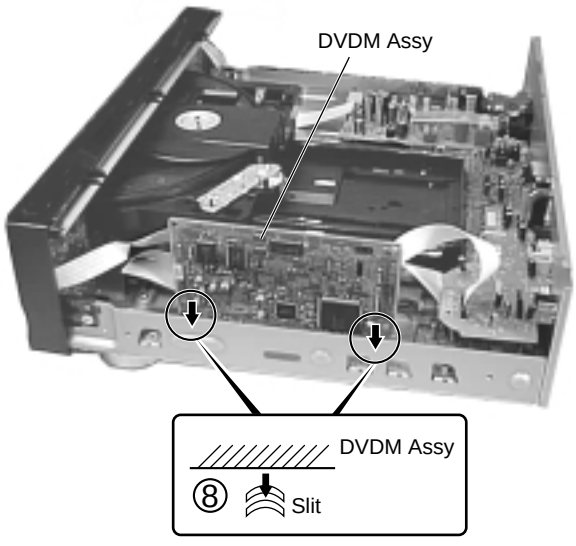
■ DVDM ASSY

① Remove a Bonnet (Six screws).

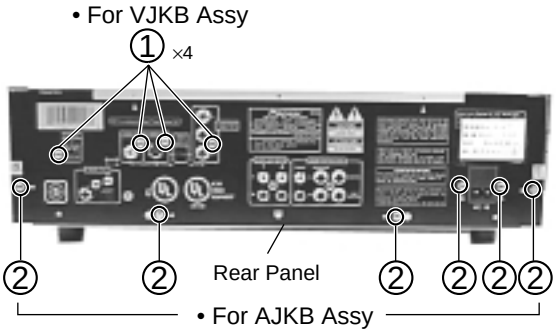
② Check FL display → [No Disc]

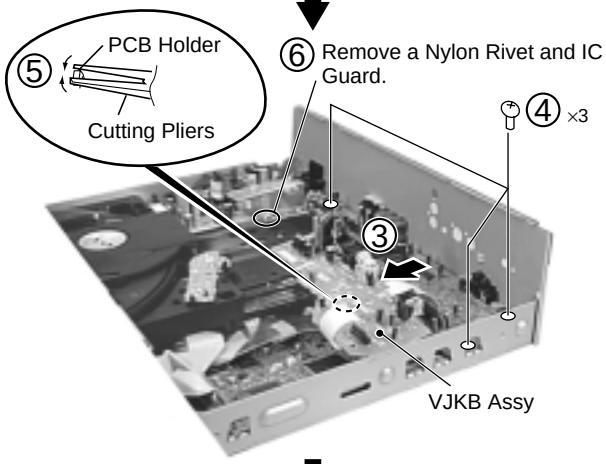


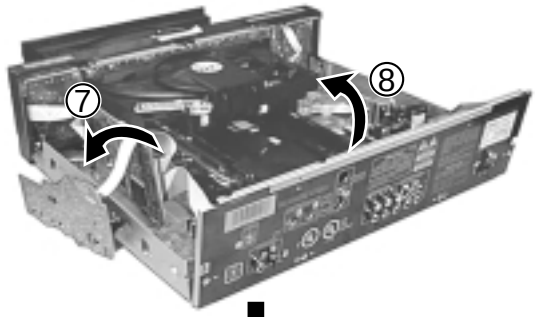


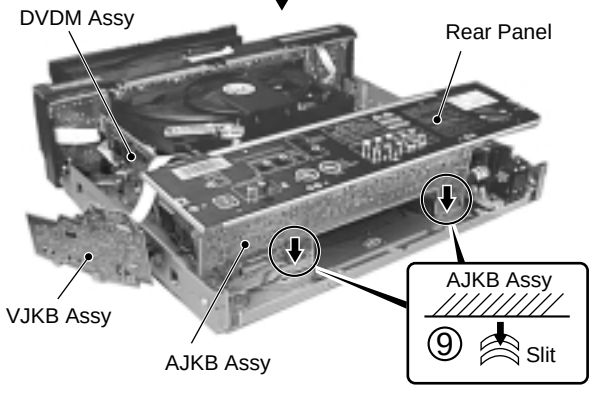


■ VJKB and AJKB ASSYS

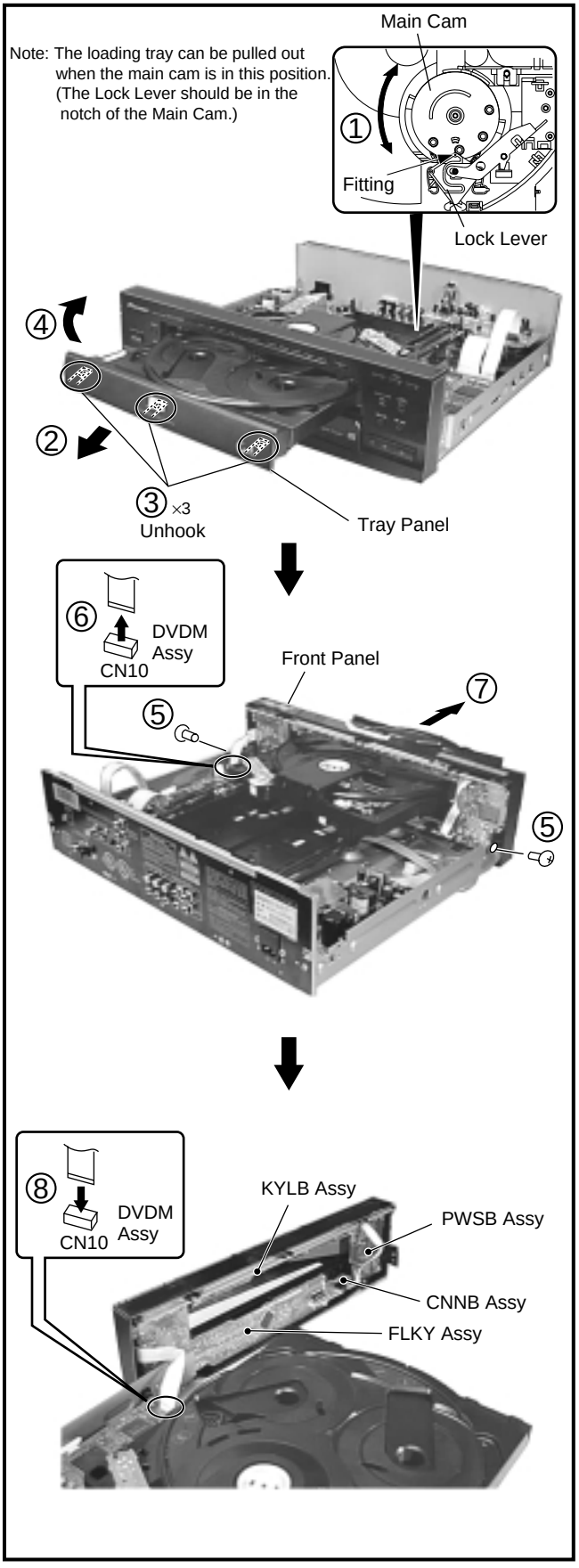






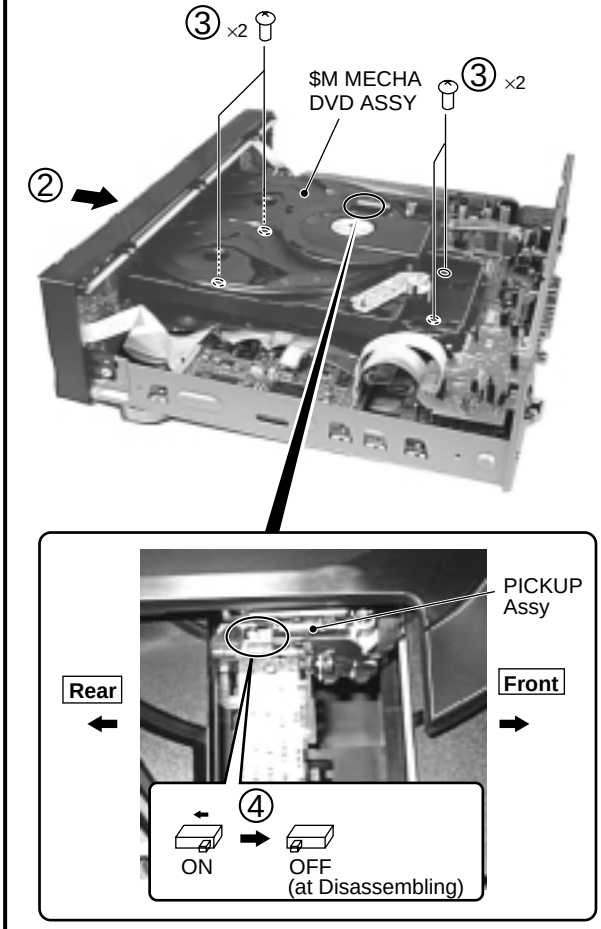


■ FRONT PANEL SECTION

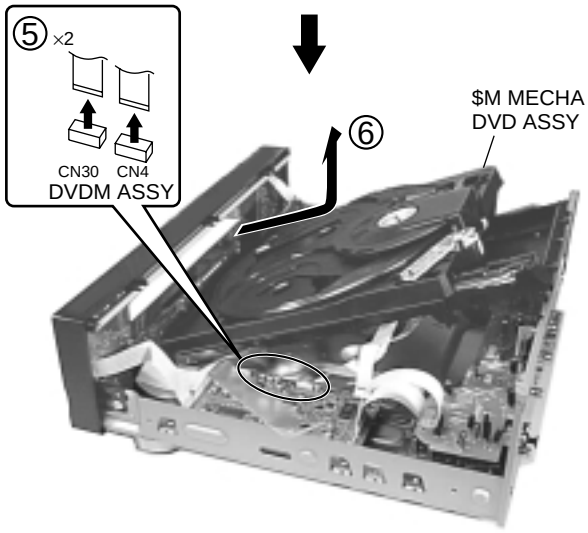


■ $M MECHA DVD ASSY

① Remove Tray Panel.
(Refer to steps ① to ④ of FRONT PANEL SECTION.)

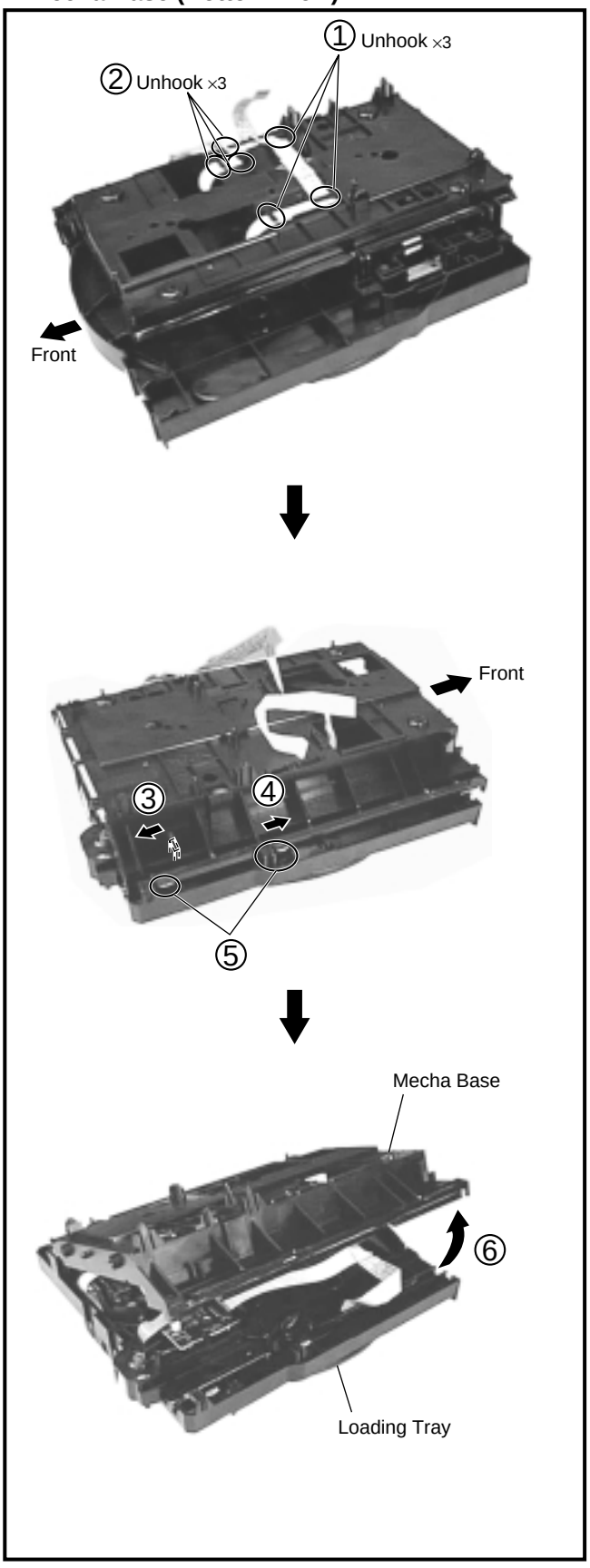


Caution :
When assembling the $M MECHA DVD Assy, connect two Flexible Cables to CN4 and CN30 on the DVDM Assy first. Then turn this switch to ON (Front side).

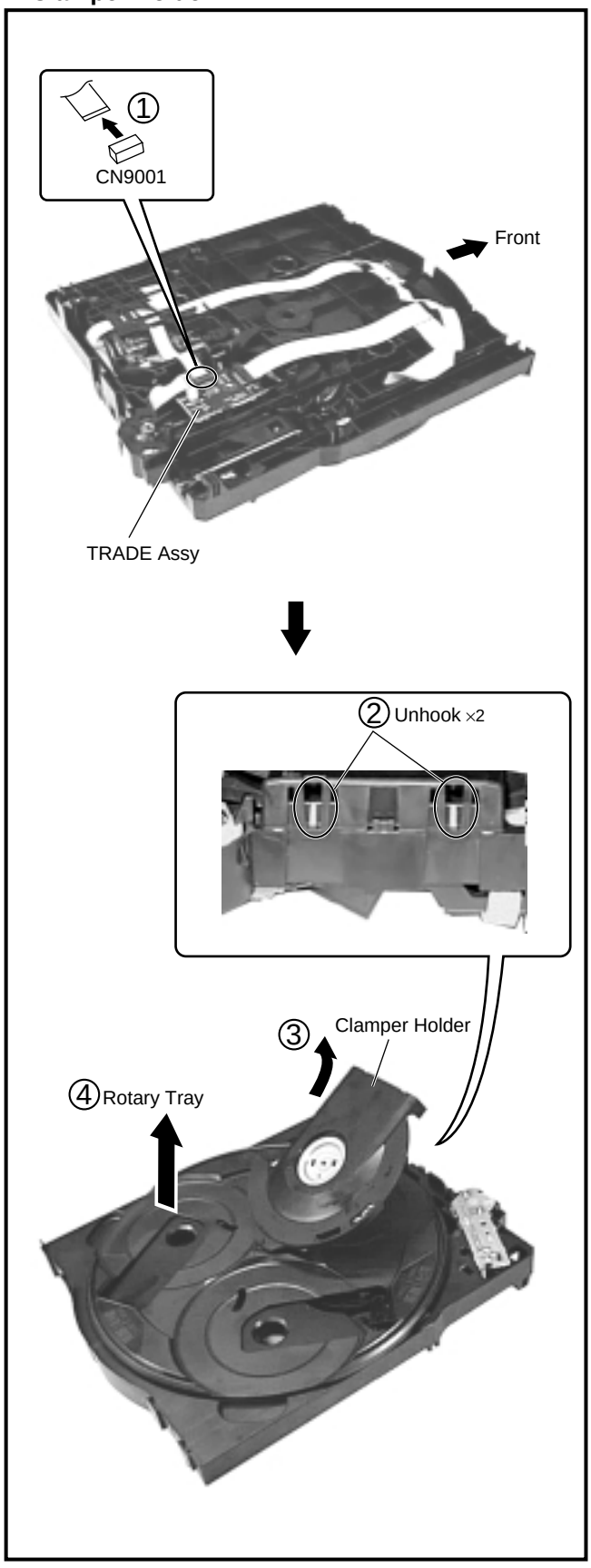


■ $M MECHA DVD ASSY ADDITIONAL TO JOB

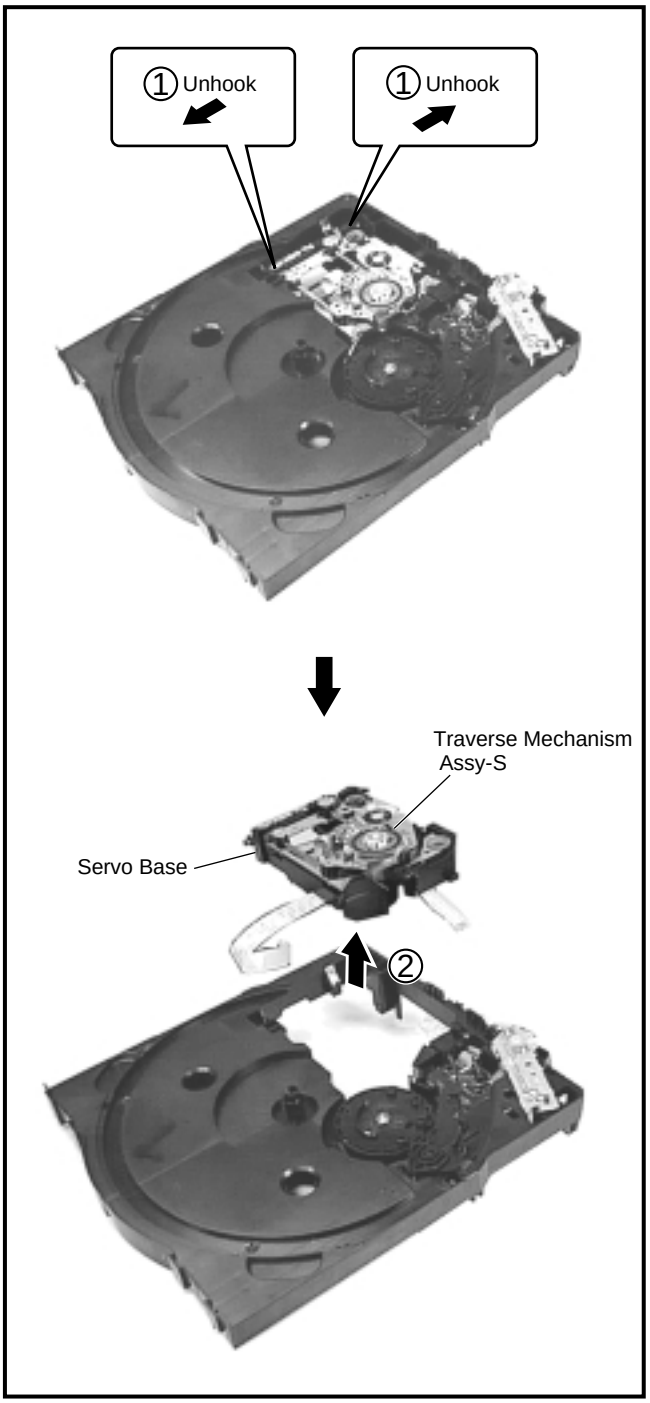
● **Mecha Base (Bottom View)**



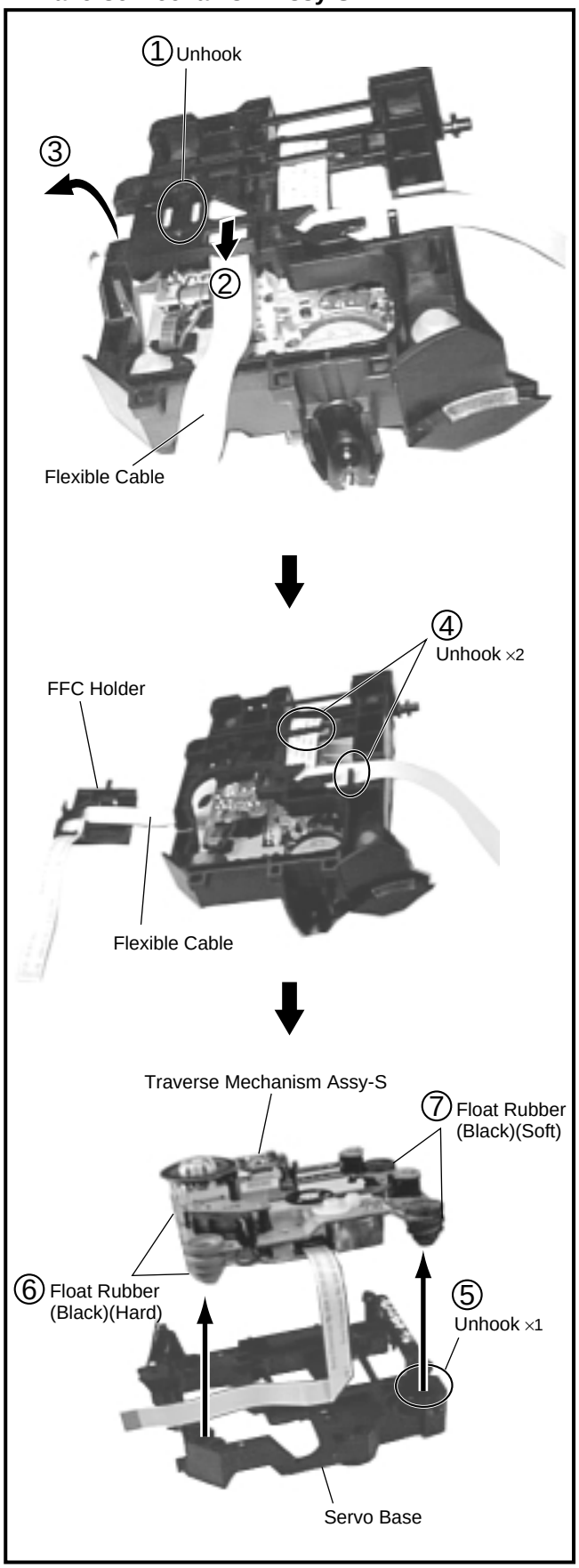
● **Clamper Holder**



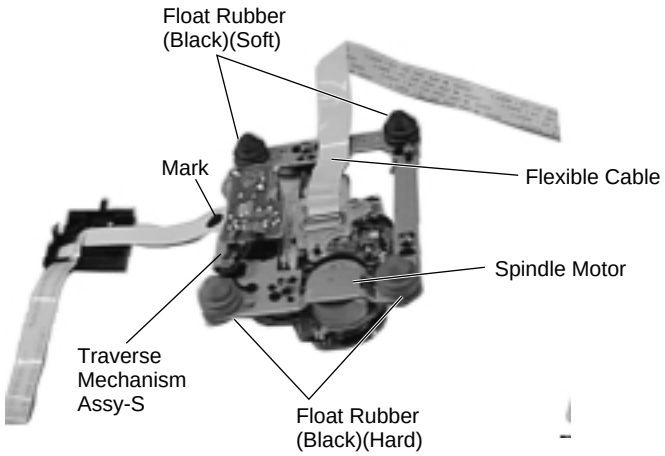
● **Servo Base**



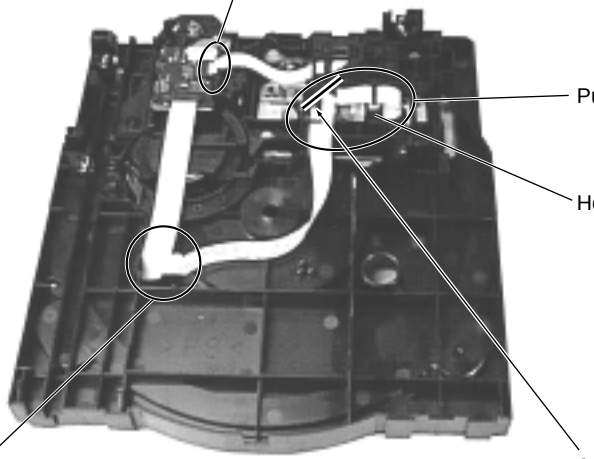
● **Traverse Mechanism Assy-S**



● **Style the Flexible Cable and Float Rubber Position in the Traverse Mechanism Assy-S**



● **Style the Flexible Cable in the $M MECHA DVD Assy and Preparation before Installing the Mecha Base**


Connect a Flexible Cable
Pull out Flexible Cable from this hole.
Hook ×4
Caution :
Confirm that the part which a Flexible Cable touches this wall.
Pass two Flexible Cables through this hole
before assembling the Mecha Base and Loading Tray.

7.2 PARTS

7.2.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

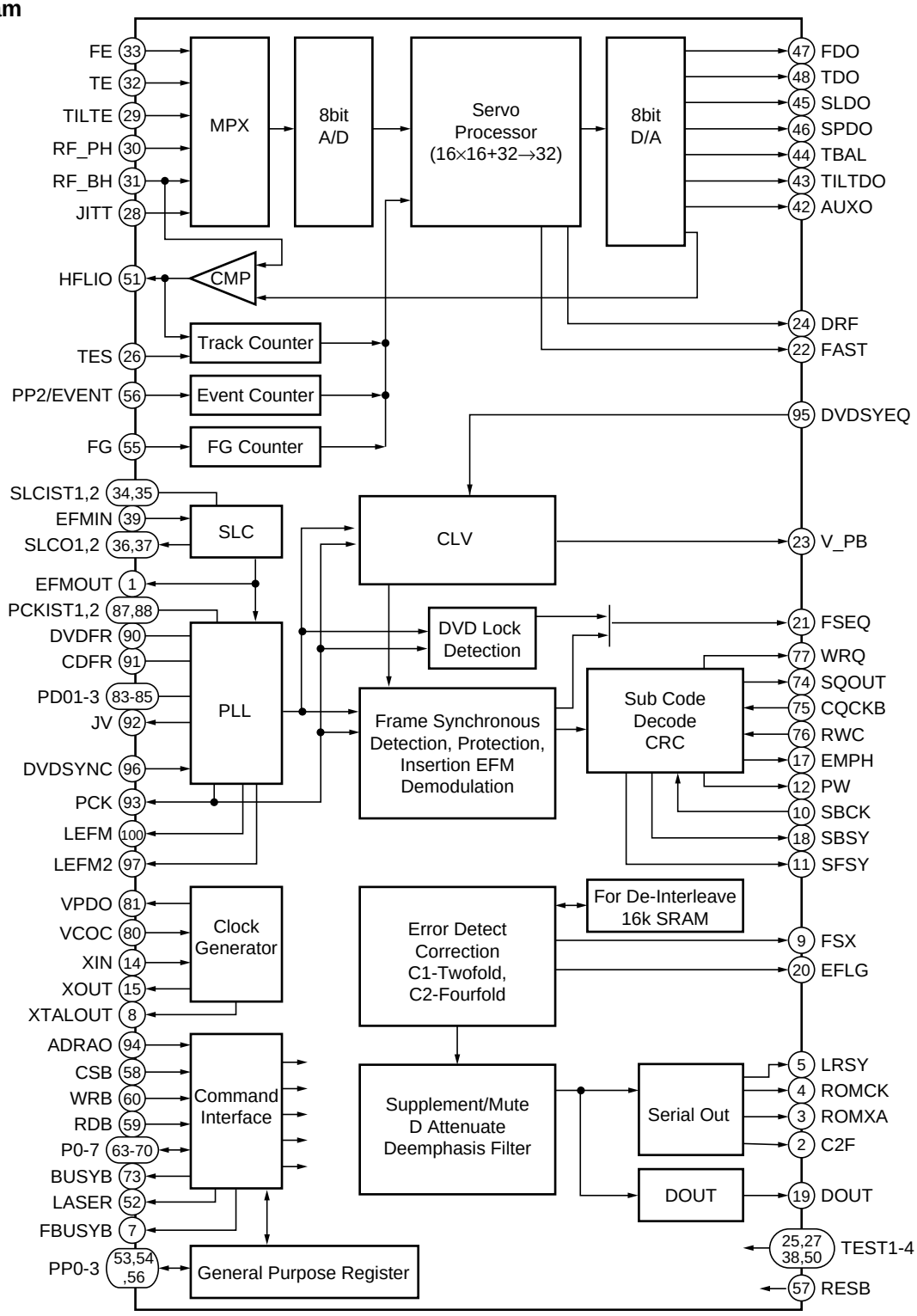
●List of IC

LC78652W, PD3410A, MB86373

■ LC78652W (DVDM ASSY : IC2)

• DSP IC

● Block Diagram



●Pin Function

No.	Pin Name	I/O	Function
1	EFMOUT	O	Output the state that was binary-stated value EFM
2	C2F	O	C2 flag output
3	ROMXA	O	CD-ROM data output
4	ROMCK	O	Shift clock output for CD-ROM data output
5	LRSY	O	L/R clock output for CD-ROM data output
6	PP3	I/O	General-purpose port input/output / DVD sync. signal input N ch-OD output
7	FBUSYB	O	Busy signal output of DSP process operation N ch-OD output
8	XTALOUT	O	External system clock output
9	FSX	O	CD 1 frame sync. signal output
10	SBCK	I	Subcode reading out clock input
11	SFSY	O	Frame sync. signal output of subcode
12	PW	O	Subcode P, Q, R, S, T, U, V and W output
13	VSS	–	GND pin
14	XIN	I	Connect a crystal resonator (16.9344MHz)
15	XOUT	O	Connect a crystal resonator
16	DVDD1	–	3.3V power supply of the oscillation circuit
17	EMPH	O	Monitor pin of the deemphasis
18	SBSY	O	Sync. signal output of the subcode block
19	DOUT	O	Audio EIAJ data output
20	EFLG	O	Error correction state monitor of the error correction C1 and C2
21	FSEQ	O	Detection monitor of the CD/DVD frame sync. signal
22	FAST	O	Playback speed monitor N ch-OD output
23	V_PB	O	Monitor output of the rough servo/CLV control
24	DRF	O	In focus monitor
25	TEST3	I	Test input 3
26	TES	I	Tracking error signal input
27	TEST2	I	Test input 2
28	JITT	I	Jitter quantity detecting signal input of EFM PLL
29	TILTE	I	Tilt error signal input
30	RF_PH	I	RF peak hold signal input
31	RF_BH	I	RF bottom hold signal input
32	TE	I	Tracking error signal input
33	FE	I	Focus error signal input
34	SLCIST1	–	Current setting pin 1 of the constant current charge pump for SLC
35	SLCIST2	–	Current setting pin 2 of the constant current charge pump for SLC
36	SLCO1	O	Control output 1 for SLC
37	SLCO2	O	Control output 2 for SLC
38	TEST1	I	Test input 1
39	EFMIN	I	EFM/EFM + input
40	AVDD	–	5V power supply of A/D and D/A for servo
41	AVSS	–	GND of A/D and D/A for servo
42	AUXO	O	DA auxiliary output
43	TILTDO	O	Tilt control signal output
44	TBAL	O	Tracking balance control signal output
45	SLDO	O	Sled control signal output
46	SPDO	O	Spindle control signal output
47	FDO	O	Focus control signal output
48	TDO	O	Tracking control signal output
49	VREF	–	Reference level of D/A for servo
50	TEST4	I	Test input 4

No.	Pin Name	I/O	Pin Function
51	HFLIO	I/O	Mirror detection signal input/output
52	LASER	O	Output pin for laser ON/OFF control
53	PP0/DVD_CDB	I/O	General-purpose port input/output / Disc discrimination signal output
54	PP1/CRCERRB	I/O	General-purpose port input/output / Subcode CRC result signal output
55	FG	I	FG counter input
56	PP2/EVENT	I/O	General-purpose port input/output / Event counter input
57	RESB	I	Reset input
58	CSB	I	Chip select input
59	RDB	I	Internal state reading signal input
60	WRB	I	Command / data writing signal input
61	DVDD2	–	5V power supply
62	VSS	–	GND
63	P0	I/O	Command / data input/output
64	P1		
65	P2		
66	P3		
67	P4		
68	P5		
69	P6		
70	P7		
71	VSS	–	GND
72	DVDD1	–	3.3V power supply for internal
73	BUSYB	O	Busy signal output of command process
74	SQOUT	O	Serial output of subcode Q
75	CQCKB	I	Shift clock input for subcode Q data output
76	RWC	I	Update permission input of subcode Q
77	WRQ	O	Read out ready monitor of subcode Q
78	AVSS	–	PLL GND for internal system clock
79	VRPFR	–	VCO oscillation range setting of PLL for system clock
80	VCOC	I	Connect a PLL filter for system clock
81	VPDO	O	
82	AVDD	–	PLL 5V power supply for system clock
83	PDO1	I/O	PLL filter connection pin 1 for EFM playback
84	PDO2	I/O	PLL filter connection pin 2 for EFM playback
85	PDO3	I/O	PLL filter connection pin 3 for EFM playback
86	AVSS	–	PLL GND for EFM playback
87	PCKIST1	–	Current setting 1 of PLL constant current charge pump for EFM playback
88	PCKIST2	–	Current setting 2 of PLL constant current charge pump for EFM playback
89	AVDD	–	PLL 5V power supply for EFM playback
90	DVDFR	–	VCO oscillation range setting of PLL for EFM playback 1
91	CDFR	–	VCO oscillation range setting of PLL for EFM playback 2
92	JV	O	Jitter output of PLL clock for EFM playback
93	PCK	O	Bit clock output for EFM playback
94	ADRAO	I	Address input
95	DVDSYEQ	I	DVD synchronize pulse input
96	DVDSYNC	I	DVD synchronous signal input
97	LEFM2	O	Output the state that cut and out a signal which was binary-stated value EFM with PCK 2
98	DVDD1	–	3.3V power supply for I/O
99	VSS	–	GND
100	LEFM	O	Output the state that cut and out a signal which was binary-stated value EFM with PCK 1

■ PD3410A (DVDM ASSY : IC11)

• System Control IC

● Pin Function

No.	Mark	Pin Name	I/O	Function
1	XCS3/XCASL	XCS3	O	PD4995A (MY CHIP) chip select signal output
2	GND	GND	–	GND
3	CK	HCPUCK	O	
4	VCC	V+3D	–	V+3D
5	PICLK	–	I/O	N.C.
6	PIDATA	–	I/O	N.C.
7	GND	GND	–	GND
8	PORTH0	–	O	N.C.
9	PORTH1	–	O	N.C.
10	PORTH2	–	O	N.C.
11	PORTH3	V_SEL2	O	Composite/S switching signal output of the skirt terminal
12	VCC	V+3D	–	V+3D
13	PORTH4	–	O	N.C.
14	PORTH5	–	O	N.C.
15	PORTH6	–	O	N.C.
16	PORTH7	–	O	N.C.
17	GND	GND	–	GND
18	EXTAL	EXTAL	I	Connect a ceramic resonator
19	XTAL	XTAL	O	
20	VCC	V+3D	–	V+3D
21	PORTG0	XCSDF0	O	DAC chip select signal output
22	PORTG1	–	O	N.C.
23	PORTG2	–	O	N.C.
24	PORTG3	–	O	N.C.
25	PORTG4	–	O	N.C.
26	GND	GND	–	GND
27	PORTG5	–	O	N.C.
28	PORTG6	–	O	N.C.
29	PORTG7	XAMUTE	O	Last stage mute signal output of the audio
30	PORTF0	44X48	O	DAC 44/48 FS switching signal output
31	PORTF1	–	I	N.C.
32	PORTF2	3DON	O	3D audio ON/bypass switching signal output
33	VCC	V+3D	–	V+3D
34	PORTF3	–	O	N.C.
35	PORTF4	–	O	N.C.
36	PORTF5	–	O	N.C.

No.	Mark	Pin Name	I/O	Function
37	PORTF6	XANR	O	Analog NR ON/OFF switching signal output
38	PORTF7	XCSVE	O	Serial communication enable signal output of the video encoder
39	GND	GND	–	GND
40	AVSS	GND	–	GND
41	AVCC	V+3D	–	V+3D
42	OUTA_P	LODRV	O	Loading drive output
43	VREF	V+3D	–	V+3D
44	OUTB_P	TEI	O	Tracking offset signal output
45	AVSS	GND	–	GND
46	AVSS	GND	–	GND
47	PORTE0	V_SEL	O	Component/composite switching signal output
48	PORTE1	–	I	PDC016A (Graphic IC)
49	PORTE2	–	I	
50	PORTE3	FOFST1	I/O	Focus offset adjustment output 1
51	PORTE4	FOFST2	I/O	Focus offset adjustment output 2
52	PORTE5	XDFINH	I/O	Defect shunt signal output
53	PORTE6	DVD/XCD	O	DVD/CD switching signal output
54	PORTE7	LD1_ON	O	650 nm laser diode ON signal output
55	PORTD0	LD2_ON	O	780 nm laser diode ON signal output
56	VCC	V+3D	–	V+3D
57	PORTD1	DPD/TE	O	1 beam/3 beams switching signal output
58	PORTD2	AGOFF	O	AGC ON/OFF switching signal output of RF IC
59	PORTD3	XCD2X	O	Signal output for switching the double speed playback
60	PORTD4	OEICG	O	OEIC gain switching signal output
61	GND	GND	–	GND
62	PORTD5	XMON	O	ON/OFF switching signal output of the spindle motor control output
63	PORTD6	–	O	
64	PORTD7	–	I	N.C.
65	PORTJ0	XDRVMUT	O	Driver mute output
66	PORTJ1	–	O	N.C.
67	PORTJ2	–	O	N.C.
68	PORTJ3	–	I	N.C.
69	VCC	V+3D	–	V+3D
70	PORTJ4	TM_ENT	I	Test mode input
71	PORTJ5	–	O	N.C.
72	PORTJ6	VSEL_SW	I	Component/composite SW input
73	PORTJ7	–	I	N.C.
74	PB0/TIOCA2	XCBUSY	I	Command busy input
75	PB1/TIOCB2	XABUSY	I	Auto-sequence busy input
76	PB2/TIOCA3	XINT2	I	Interrupt input 2 (AV-1)
77	VCC	V+3D	–	V+3D
78	PB3/TIOCB3	LT1	O	Communication response signal output to the FL controller
79	PB4/TIOCA4	SBSY	I	Subcode block sync. input
80	XMTEST	–	I	V+3D
81	XCPUMD	–	I	V+3D
82	XRES	XRESET	I	Reset input

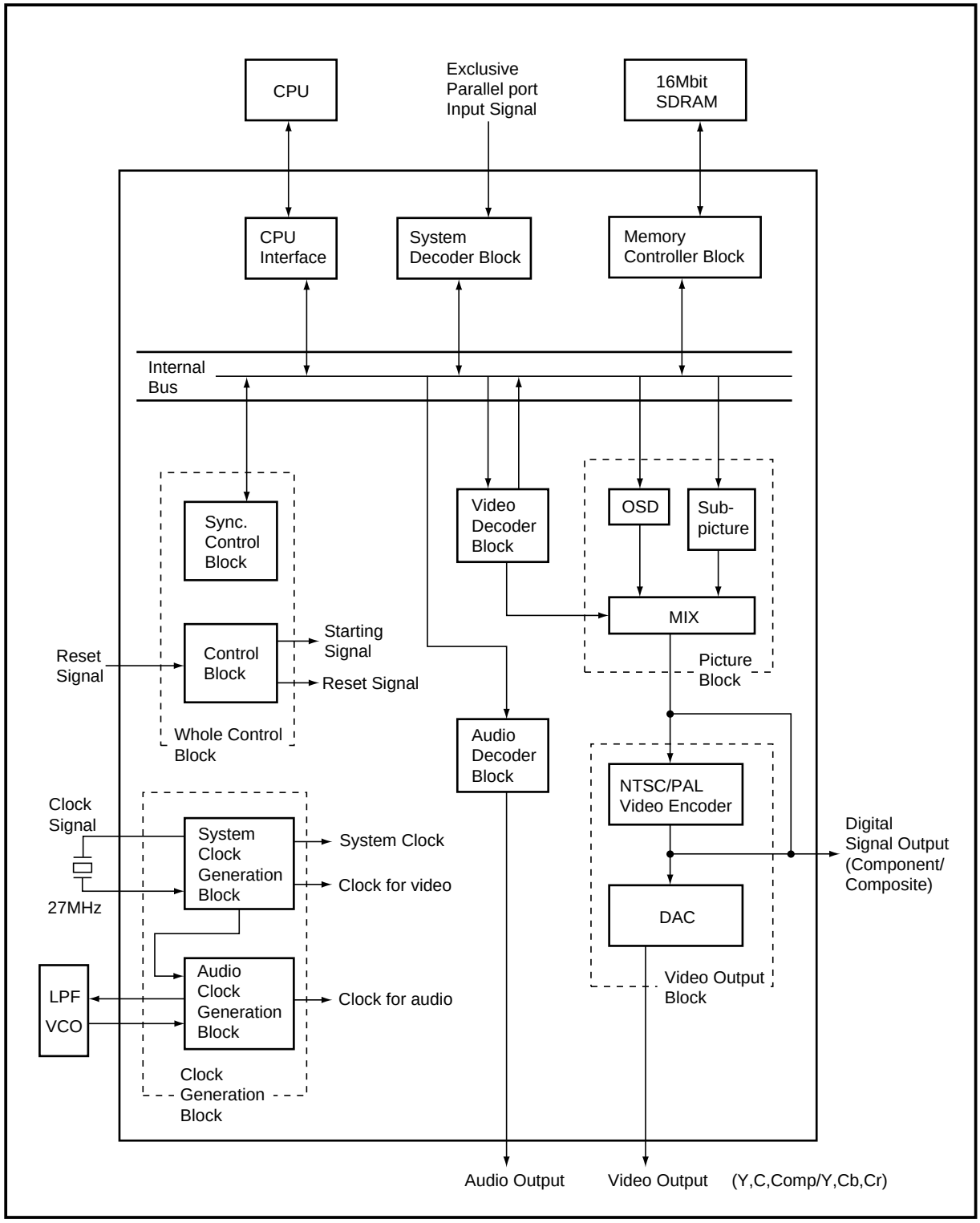
No.	Mark	Pin Name	I/O	Function
83	GND	GND	–	GND
84	AN0	LODPOS	I	Loading position input
85	AN1	SLDPOS	I	Slider position input
86	AN2	–	I	N.C.
87	AN3	NAP_SW	I	NTSC/AUTO/PAL SW input
88	AN4		I	
89	AN5		I	
90	AN6		I	
91	AN7	–	I	
92	Avref	V+3D	–	V+3D
93	AVCC	V+3D	–	V+3D
94	AVSS	GND	–	GND
95	PB5/TIOCB4	–	I	N.C.
96	PB6/TIOCXA4/TCLKC	C2F	I	C2 error input
97	PB7/TIOCXB4/TCLKD	XRDY	I	Communication request input from the FL controller
98	PB8/RxD0	SSI	I	Serial data input (FL controller)
99	PB9/TxD0	SSO	O	Serial data output (FL controller, DAC)
100	VCC	V+3D	–	V+3D
101	PB10/RxD1	RXD	I	Data input of the RS-232C
102	PB11/TxD1	TXD	O	Data output of the RS-232C
103	PB12/XIRQ4/SCK0	SSCK	I/O	Serial clock output (FL controller, DAC)
104	PB13/XIRQ5/SCK1	XIRQL10	I	Interrupt input 1 (MY CHIP)
105	GND	GND	–	GND
106	PB14/XIRQ6	XIRQL11	I	Interrupt input 2 (MY CHIP)
107	PB15/XIRQ7	XINT0	I	Interrupt input 0 (AV-1)
108	PA0/XCS4/TIOCA0	XCS4	O	Servo DSP chip select signal output
109	PA1/XCS5/XRAS	N.C.	O	Non connection
110	PA2/XCS6/TIOCB0	XCS6	O	AV-1 chip select signal output
111	XWAIT	XWAIT	I	Wait signal input
112	XWRL	XWRL	O	Write pulse output L
113	GND	GND	–	GND
114	XWRH	XWRH	O	Write pulse output H
115	XRD	XRD	O	Read pulse output
116	PA7/XBACK	XCURDET	I	Over-current detection signal input
117	PA8/XBREQ	CTS	I	RS-232C transfer permit input
118	PA9/XAH/XIRQOUT/ XADTRG	DTR	O	RS-232C transfer permit output
119	PA10/DPL/TIOCA1	XINT1	I	Interrupt input 1 (AV-1)
120	PA11/DPH/TIOCB1	THLD	I	Tracking hold signal input
121	VCC	V+3D	–	V+3D
122	PA12/XIRQ0/DACK0/ TCLKA	DACK0	O	DMA response output (MY CHIP)
123	PA13/XIRQ1/ XDREQ0/TCLKB	XDREQ0	I	DMA request input (MY CHIP)
124	PA14/XIRQ2/XDACK1	XDACK1	O	DMA response output (AV-1)
125	PA15/XIRQ3/XDREQ1	XDREQ1	I	DMA request input (AV-1)
126	AD0	D0	I/O	Data bus 0

No.	Mark	Pin Name	I/O	Function
127	GND	GND	–	GND
128	AD1	D1	I/O	Data bus 1
129	AD2	D2	I/O	Data bus 2
130	AD3	D3	I/O	Data bus 3
131	AD4	D4	I/O	Data bus 4
132	AD5	D5	I/O	Data bus 5
133	AD6	D6	I/O	Data bus 6
134	VCC	V+3D	–	V+3D
135	AD7	D7	I/O	Data bus 7
136	AD8	D8	I/O	Data bus 8
137	AD9	D9	I/O	Data bus 9
138	AD10	D10	I/O	Data bus 10
139	GND	GND	–	GND
140	AD11	D11	I/O	Data bus 11
141	AD12	D12	I/O	Data bus 12
142	AD13	D13	I/O	Data bus 13
143	AD14	D14	I/O	Data bus 14
144	VCC	V+3D	–	V+3D
145	AD15	D15	I/O	Data bus 15
146	A0 (XHBS)	A0	O	Address bus 0
147	A1	A1	O	Address bus 1
148	A2	A2	O	Address bus 2
149	GND	GND	–	GND
150	A3	A3	O	Address bus 3
151	A4	A4	O	Address bus 4
152	A5	A5	O	Address bus 5
153	A6	A6	O	Address bus 6
154	A7	A7	O	Address bus 7
155	A8	A8	O	Address bus 8
156	A9	A9	O	Address bus 9
157	A10	A10	O	Address bus 10
158	A11	A11	O	Address bus 11
159	A12	A12	O	Address bus 12
160	A13	A13	O	Address bus 13
161	A14	A14	O	Address bus 14
162	A15	A15	O	Address bus 15
163	A16	A16	O	Address bus 16
164	A17	A17	O	Address bus 17
165	VCC	V+3D	–	V+3D
166	A18	A18	O	Address bus 18
167	A19	A19	O	Address bus 19
168	A20	A20	O	Address bus 20
169	A21	A21	O	N.C.
170	XNMI	XNMI	I	V+3D
171	GND	GND	–	GND
172	XCS10	–	O	N.C.
173	XCS20	XCS20	O	Chip select signal output of the flash ROM
174	XCS22	–	O	N.C.
175	XCS23	XCS23	O	Chip select signal output of the SRAM
176	XCS2	–	O	N.C.

■ MB86373 (DVDM ASSY : IC18)

- **MPEG2 Decoder IC**

● **Block Diagram**



● Pin Function

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	CLKSEL	I	ON/OFF signal of PLL ("H" : ON, "L" : OFF)	27	VDD	–	2.5V power supply
2	DIGCPN7	O	Digital component signal output (MSB) Digital Y signal output (9-bit) (MSB)	28	DIGCOMP4	O	Digital composite signal output Digital C signal output
3	VSS	–	GND	29	DIGCOMP3		
4	DIGCPN6	O	Digital component signal output Digital Y signal output (9-bit)	30	DIGCOMP2		
5	DIGCPN5			31	DIGCOMP1		
6	DIGCPN4			32	DIGCOMP0		Digital composite signal output (LSB) Digital C signal output (LSB)
7	DIGCPN3			33	DACK	O	27 MHz clock output
8	DIGCPN2			34	N.C.	–	Non connection
9	DIGCPN1			35	VSSA3	–	GND (D/A converter)
10	VDD	–	2.5V power supply	36	ANAC	O	Analog color (C) output signal
11	DIGCPN0	O	Digital component signal output (LSB) Digital Y signal output (9-bit) (LSB)	37	VDDA3	–	2.5V power supply (for built-in D/A converter only)
12	RBSEL	O	Cb and Cr discrimination signal at the digital component signal output. LSB at the digital Y signal output.	38	VSSA2	–	GND (D/A converter)
13	XHS	O	Horizontal sync. output signal	39	ANAY	O	Analog luminance (Y) output signal
14	XVS	O	Vertical sync. output signal	40	VDDA2	–	2.5V power supply (for built-in D/A converter only)
15	VSS	–	GND	41	VREF	I	Reference voltage for D/A converter
16	XRESET	I	LSI reset signal	42	VRO	O	Internal current setting pin of D/A converter
17	XLDCSYNC	I	External sync. signal input (LD mode)	43	VDDA4	–	2.5V power supply (for built-in D/A converter only)
18	KEY	O	KEY signal for LD and OSD overlay (LD mode)	44	VSSA1	–	GND (D/A converter)
19	PD	O	Phase comparison result output signal of horizontal sync. (LD mode)	45	ANACOMP	O	Analog composite output signal
20	VFLD	O	Field discrimination signal at the digital signal output H : even field L : odd field	46	VDDA1	–	2.5V power supply (for built-in D/A converter only)
21	DIGCOMP9	O	Digital composite signal output (MSB) Digital C signal output (MSB)	47	BF	O	Burst flag signal
22	DIGCOMP8	O	Digital composite signal output Digital C signal output	48	XBLK	O	H/V composite blanking signal
23	DIGCOMP7			49	TEST4	O	Normally, set to "open".
24	DIGCOMP6			50	VSS	–	GND
25	DIGCOMP5			51	TEST0	I	Normally, set to "open".
26	VSS	–	GND	52	TEST1	I	"L" status normally

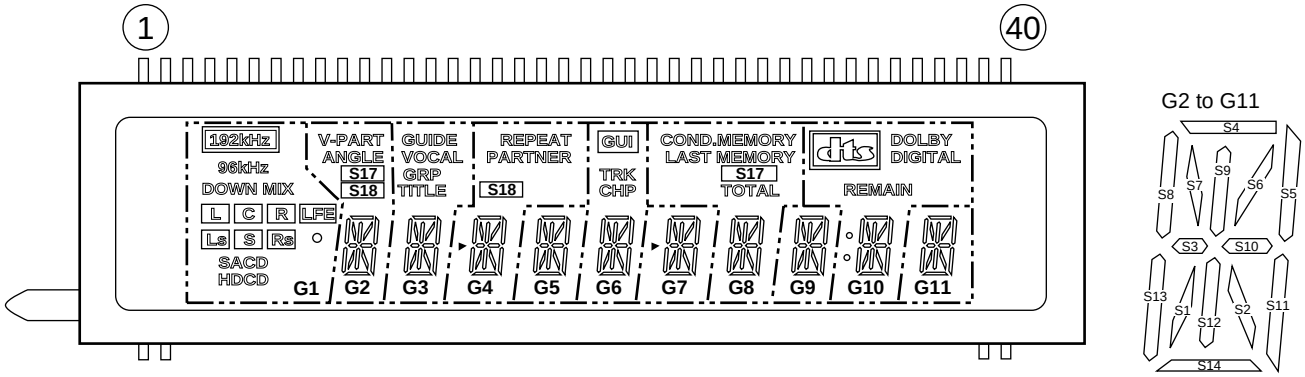
No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
53	DAIIN	I	Digital data input of external input (SPDIF)	92	HADRS10	I	CPU address bus signal (MSB)
54	CDDATA	I	Audio data input of external input (correspond to CD)	93	HADRS9	I	CPU address bus signal
55	CDLR	I	Data channel clock input of external input (correspond to CD)	94	HADRS8		
56	CDBCK	I	Data clock input of external input (correspond to CD)	95	HADRS7		
57	AODATA3	O	Audio decode data	96	VSS	–	GND
58	AODATA2			97	VDD	–	2.5V power supply
59	AODATA1			98	HADRS6	I	CPU address bus signal
60	VSS	–	GND	99	HADRS5		
61	VDD	–	2.5V power supply	100	HADRS4		
62	AODATA0	O	Audio decode data	101	HADRS3		
63	AOPCM	O	Digital audio interface output (compression data)	102	HADRS2		CPU address bus signal (LSB)
64	AODAI	O	Digital audio interface output (decode data)	103	HDATA15	I/O	CPU data bus signal (MSB)
65	LRCK	O	Data channel clock for D/A and digital filter	104	HDATA14		CPU data bus signal
66	AOMCK	O	Master clock for D/A and digital filter	105	HDATA13		
67	BCK	O	Bit clock for D/A and digital filter	106	HDATA12		
68	TEST2	I	Normally, set to "open".	107	VSS	–	GND
69	TEST3			108	HDATA11	I/O	CPU data bus signal
70	NC	–	Non connection	109	HDATA10		
71	XDSPRST	I	Normally, set to "open".	110	HDATA9		
72	VSS	–	GND	111	HDATA8		
73	TEST5	O	Normally, set to "open".	112	HDATA7		
74	NC	–	Normally, set to "open".	113	HDATA6		
75	NC			114	VDD	–	2.5V power supply
76	NC			115	HDATA5	I/O	CPU data bus signal
77	NC			116	HDATA4		
78	SD7	I	Parallel data input	117	HDATA3		
79	VDD	–	2.5V power supply	118	HDATA2		
80	SD6	I	Parallel data input	119	VSS	–	GND
81	SD5			120	HDATA1	I/O	CPU data bus signal
82	SD4			121	HDATA0		CPU data bus signal (LSB)
83	SD3			122	BUSSEL	I	Bus width selection signal (0 : 8-bit bus, 1 : 16-bit bus)
84	SD2			123	XOSDACK	I	OSD data acknowledge signal
85	VSS	–	GND	124	XOSDREQ	O	OSD data request signal
86	SD1	I	Parallel data input	125	HCPUSEL1	I	CPU selection signal (00 :SPARC, 01 :86 system, 10 :68 system, 11 :Reserve)
87	SD0			126	HCPUSEL0		
88	XERR	I	Error input signal	127	XINT3	O	Interrupt request signal to the CPU
89	XSACK	I	Acknowledge signal	128	XINT2		
90	XTEST	I	Set to "H" at normal use	129	XINT1		
91	SREQ	O	Data request signal	130	VSS	–	GND

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
131	VDD	–	2.5V power supply	170	XMDRCAS	O	CAS signal for SDRAM
132	XINT0	O	Interrupt request signal to CPU	171	XMDRDQM1	O	Input mask / output enable signal for SDRAM
133	XEXTRDY	O	SPARC, 68 system : Ready signal to CPU 86 system : Acknowledge (ACK) signal to CPU	172	VSS	–	GND
134	HRW	I	CPU read / write signal	173	XMDRWE	O	Write enable signal for SDRAM
135	HCLKIN	I	Host clock input	174	XMDRDQM0	O	Input mask / output enable signal for SDRAM
136	XHCS	I	LSI chip select signal	175	MDRDAT8	I/O	Data bus signal for SDRAM
137	XHAS	I	SPARC, 68 system : CPU address strobe 86 system : CPU address status	176	VSS	–	GND
138	XHBE3	I	CPU byte enable signal	177	MDRDAT7	I/O	Data bus signal for SDRAM
139	XHBE2			178	MDRDAT9		
140	XHBE1			179	MDRDAT6		
141	XHBE0			180	MDRDAT10		
142	VSS	–	GND	181	MDRDAT5		
143	MDRADR4	O	Address signal for SDRAM	182	VSS	–	GND
144	MDRADR3			183	VDD	–	2.5V power supply
145	MDRADR5			184	MDRDAT11	I/O	Data bus signal for SDRAM
146	MDRADR2			185	MDRDAT4		
147	VDD	–	2.5V power supply	186	MDRDAT12		
148	VSS	–	GND	187	MDRDAT3		
149	MDRADR6	O	Address signal for SDRAM	188	MDRDAT13		
150	MDRADR1			189	VSS	–	GND
151	MDRADR7			190	MDRDAT2	I/O	Data bus signal for SDRAM
152	MDRADR0		Address signal for SDRAM (LSB)	191	MDRDAT14		
153	MDRADR8		Address signal for SDRAM	192	MDRDAT1		
154	VSS	–	GND	193	MDRDAT15		Data bus signal for SDRAM (MSB)
155	TEST6	I	"L" status normally	194	MDRDAT0	I/O	Data bus signal for SDRAM (LSB)
156	TEST7			195	VSS	–	GND
157	TEST8			196	N.C.	–	Non connection
158	TEST9			197	ICK27M	I	System clock input
159	MDRADR10	O	Address signal for SDRAM	198	VSS	–	GND
160	MDRADR9			199	OCK27M	O	System clock output
161	MDRADR11		Address signal for SDRAM (MSB)	200	VSSA(VCO)	–	GND (for VCO only)
162	XMDRCS	O	Chip select signal for SDRAM	201	VDDA(VCO)	–	2.5V power supply (for VCO only)
163	MDRCKE	O	Clock enable signal for SDRAM	202	ILPF	O	PLL block inverter output for audio
164	VSS	–	GND	203	MLPF	I	PLL block inverter input for audio
165	VDD	–	2.5V power supply	204	OLPF	O	Phase detector output for audio
166	XMDRRAS	O	RAS signal for SDRAM	205	OVCO	I	VCO input for audio clock
167	MDRCLK	O	Clock output signal for SDRAM	206	VSS	–	GND
168	VSS	–	GND	207	XPLLRST	I	PLL section reset signal
169	MDRCLKIN	I	Clock input signal for SDRAM	208	XSYNCRST	I	SYNC reset signal

7.2.2 DISPLAY

■ VAW1050 (FLKY ASSY : V101)

• FL DISPLAY



• ANODE AND GRID ASSIGNMENT

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11
S1	192kHz	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1
S2	96kHz	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2
S3	DOWN MIX	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3
S4	L	S4	S4	S4	S4	S4	S4	S4	S4	S4	S4
S5	C	S5	S5	S5	S5	S5	S5	S5	S5	S5	S5
S6	R	S6	S6	S6	S6	S6	S6	S6	S6	S6	S6
S7	LFE	S7	S7	S7	S7	S7	S7	S7	S7	S7	S7
S8	Ls	S8	S8	S8	S8	S8	S8	S8	S8	S8	S8
S9	S	S9	S9	S9	S9	S9	S9	S9	S9	S9	S9
S10	Rs	S10	S10	S10	S10	S10	S10	S10	S10	S10	S10
S11	○	S11	S11	S11	S11	S11	S11	S11	S11	S11	S11
S12	SACD	S12	S12	S12	S12	S12	S12	S12	S12	S12	S12
S13	HDCD	S13	S13	S13	S13	S13	S13	S13	S13	S13	S13
S14		S14	S14	S14	S14	S14	S14	S14	S14	S14	S14
S15		V-PART	GUIDE	▷		GUI	▷	COND MEMORY		○ ○	
S16		ANGLE	VOCAL	REPEAT		TRK		LAST MEMORY		dts	
S17		S17	GRP	PARTNER		CHP		S17		DOLBY DIGITAL	
S18		S18	TITLE	S18				TOTAL		REMAIN	

• PIN ASSIGNMENT

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Assignment	NL	F1	NL	NL	S18	S17	S16	S15	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3

Pin No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Assignment	S2	S1	NL	G11	G10	G9	G8	NL	NL	G7	G6	G5	G4	G3	G2	G1	NL	NL	F2	NL

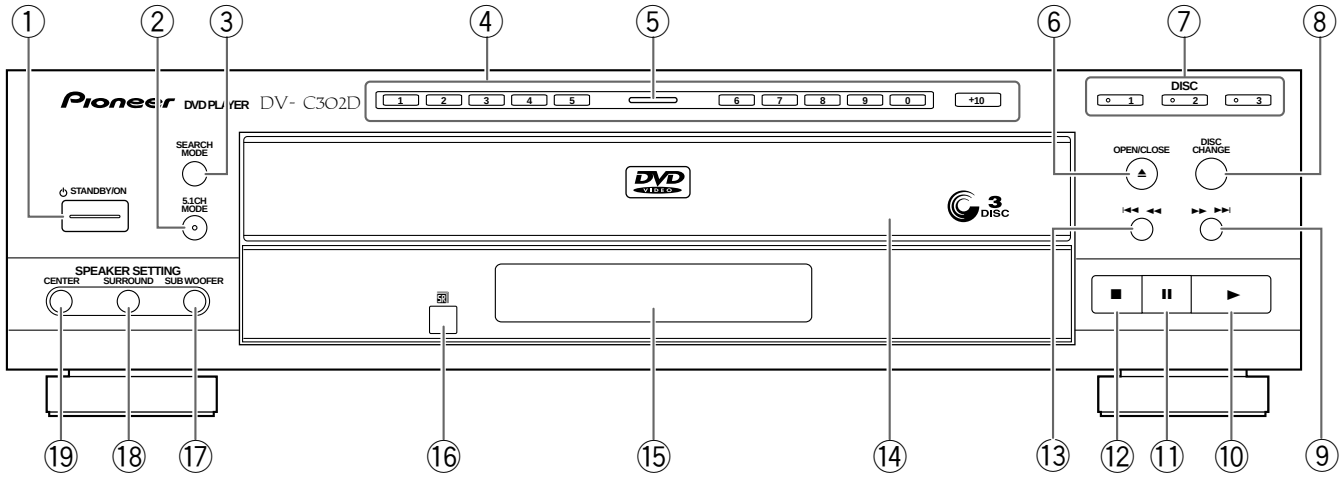
F1, F2 : Filament G1~G11 : Grid S1~S18 : Anode NL : No Lead

8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

8.1.1 Front Panel Section

■ DV-C302D


Pioneer DVD PLAYER DV- C302D
1 2 3 4 5 6 7 8 9 0 +10
DISC 1 2 3
SEARCH MODE
5.1CH MODE
STANDBY/ON
OPEN/CLOSE
DISC CHANGE
SPEAKER SETTING
CENTER SURROUND SUB WOOFER
3 DISC
■ II ►
⑲ ⑱ ⑰ ⑯ ⑮ ⑭ ⑬ ⑫ ⑪ ⑩ ⑨
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① **⏻ STANDBY/ON button**
Press to switch the player on or to put in standby.

② **5.1 CH MODE button**
Press to switch the audio output between 5.1 channel audio and 2 channel audio. It is also possible to set the default audio output in the Setup screen **Audio 2** menu.

③ **SEARCH MODE button**
Press to perform a title, chapter/track or elapsed time search.

④ **Number buttons (1-9, 0, +10)***
Use to perform direct title and chapter/track searches, and to input numerical values.

⑤ **Disc illumination**
Lights when a DVD is loaded and when no disc is loaded. Turns off when a disc format other than DVD is loaded in the player.

⑥ **OPEN/CLOSE ⏏ button**
Press to open and close the disc tray.

⑦ **DISC button**
Use to select discs in the player directly.

⑧ **DISC CHANGE button**
Press to select the next disc in the player.

⑨ **►► ►►| (forward) button**
Press to advance to chapters/tracks. Press and hold to perform fast-forward scanning.

⑩ **► (play) button**
Press to start or resume playback.

⑪ **II (pause) button**
Press during playback to pause. Press again to resume playback.

⑫ **■ (stop) button**
Press to stop playback. Pressing once enables playback to resume from a point shortly before the location where it stopped. Pressing twice causes the disc to return to the beginning of the disc if playback starts again.

⑬ **|◄◄ ◄◄ (reverse) button**
Press to go back to previous chapters/tracks. Press and hold to perform reverse playback scanning.

⑭ **Disc tray**
When loading a disc, place discs in the disc tray with the label side facing up.

⑮ **Display window**
Displays system information.

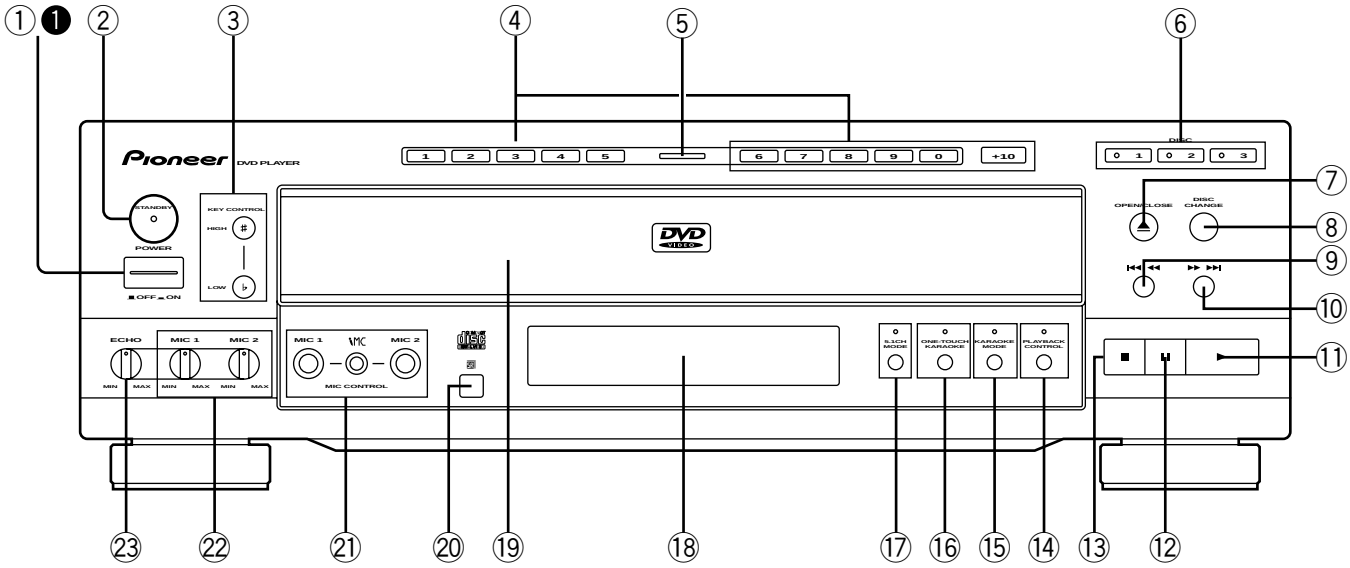
⑯ **Remote sensor**
Point the remote control toward the remote sensor to operate the player.

⑰ **SUB WOOFER button**
Press to turn the SUB WOOFER (LFE) channel on and off when listening to sources being output from the 5.1 channel discrete audio outputs.

⑱ **SURROUND button**
Press to turn the surround (rear) speaker channels on and off when listening to sources being output from the 5.1 channel discrete audio outputs.

⑲ **CENTER button**
Press to turn the center speaker channel on and off when listening to sources being output from the 5.1 channel discrete audio outputs.

■ DV-K302CD



① [Models having a STANDBY/ON button on the main unit]

⏻ STANDBY/ON button

Press to switch the player on or to put in standby.

[Models having a POWER switch on the main unit]

❶ **POWER switch**

Press to switch the player on or off.

When this switch is "ON", the remote control can be used to switch the player between the "ON" state and standby.

② **STANDBY indicator**

Indicates that the player is in standby, using a minimum amount of power to maintain system settings.

Turns off when the player is on.

Some models do not have a STANDBY indicator.

③ **KEY CONTROL buttons**

Use to adjust the levels of the key in 11 steps.

④ **Number buttons (1-9, 0, +10)**

Use to perform direct title and chapter/track searches, and to input numerical values.

⑤ **Disc illumination**

Lights when a DVD is loaded and when no disc is loaded.

Turns off when a disc other than a DVD is played back.

⑥ **DISC buttons and indicator**

Use to select discs in the player directly.

⑦ **OPEN/CLOSE ⏏ button**

Press to open and close the disc tray.

⑧ **DISC CHANGE button**

Press to select the next disc in the player.

⑨ **⏮ ◀◀ (reverse) button**

Press to go back to previous chapters/tracks. Press and hold to perform reverse playback scanning (page 28).

⑩ **▶▶ ⏭ (forward) button**

Press to advance to chapters/tracks. Press and hold to perform fast-forward scanning.

⑪ **▶ (play) button**

Press to start or resume playback.

⑫ **⏸ (pause) button**

Press during playback to pause. Press again to resume playback.

⑬ **■ (stop) button**

Press to stop playback. Pressing once enables playback to resume from a point shortly before the location where it stopped. Pressing twice causes the disc to return to the beginning of the disc if playback starts again. Resume play is possible only in Normal mode.

⑭ **PLAYBACK CONTROL button and indicator**

Use to switch the playback control for the Super VCD/Video CD on or off.

⑮ **KARAOKE MODE button and indicator**

Use to switch between Karaoke mode and Normal mode.

⑯ **ONE-TOUCH KARAOKE button and indicator**

Use to switch One-Touch Karaoke mode on or off.

⑰ **5.1 CH MODE button and indicator**

Press to switch the audio output between 5.1 channel audio and 2 channel audio. It is also possible to set the default audio output in the Setup screen **Audio 2** menu.

⑱ **Display window**

Displays system information.

⑲ **Disc tray**

When loading discs, place discs in the disc tray with the label side facing up.

⑳ **Remote sensor**

Point the remote control toward the remote sensor to operate the player.

㉑ **MIC1, MIC2 and MIC CONTROL jacks**

Use to connect a microphone.

㉒ **MIC1 and MIC2 volume level knobs**

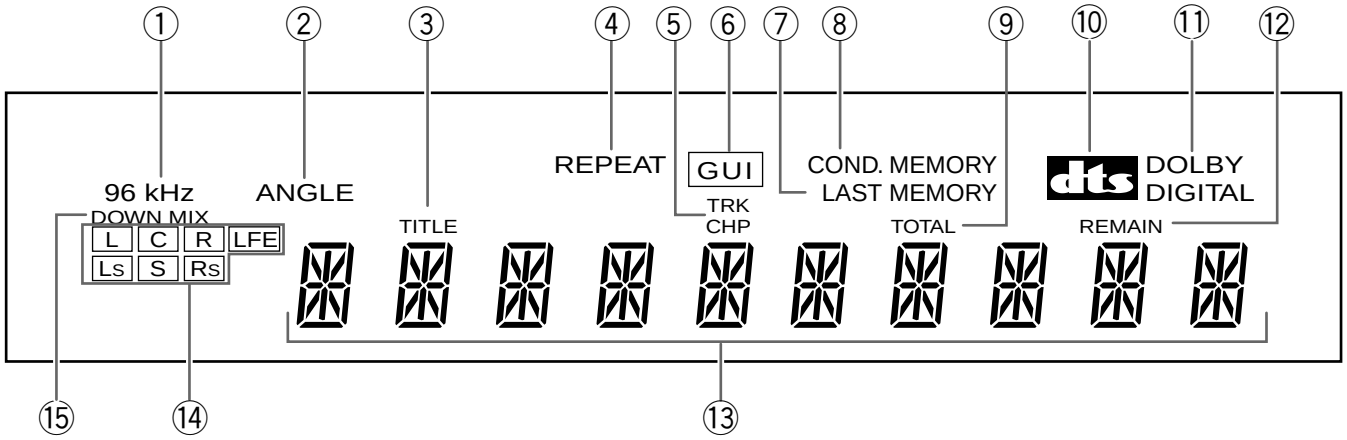
Use to adjust the volume level of the microphone.

㉓ **Digital Echo level knob**

Use to adjust the echo level.

8.1.2 Display Window

■ DV-C302D



① **96 kHz indicator**
Indicates that the currently loaded disc contains an audio signal with a sampling frequency of 96 kHz.

② **ANGLE indicator**
Indicates Multi-Angle playback is in progress.

③ **TITLE indicator**
Indicates a title number is being displayed.

④ **REPEAT indicator**
Indicates that the Repeat function is on.

⑤ **TRK and CHP indicator**
Indicates a chapter or track number is being displayed.

⑥ **GUI indicator**
Indicates an on-screen menu operation is being performed.

⑦ **LAST MEMORY indicator**
Indicates the Last Memory location is recorded in memory for the currently loaded DVD or Video CD.

⑧ **COND. MEMORY indicator**
Indicates that Condition Memory settings are memorized for the currently loaded DVD.

⑨ **TOTAL indicator**
Indicates that the disc in the player is stopped and **DISPLAY** has been pressed.

⑩ **DTS indicator**
Indicates DTS audio playback.

⑪ **DOLBY DIGITAL indicator**
Indicates Dolby Digital audio playback.

⑫ **REMAIN indicator**
Indicates that the remaining playback time of a title or chapter/track is being displayed.

⑬ **Counter display**
Displays the playback mode, type of disc, title and chapter/track numbers, playback time, etc.

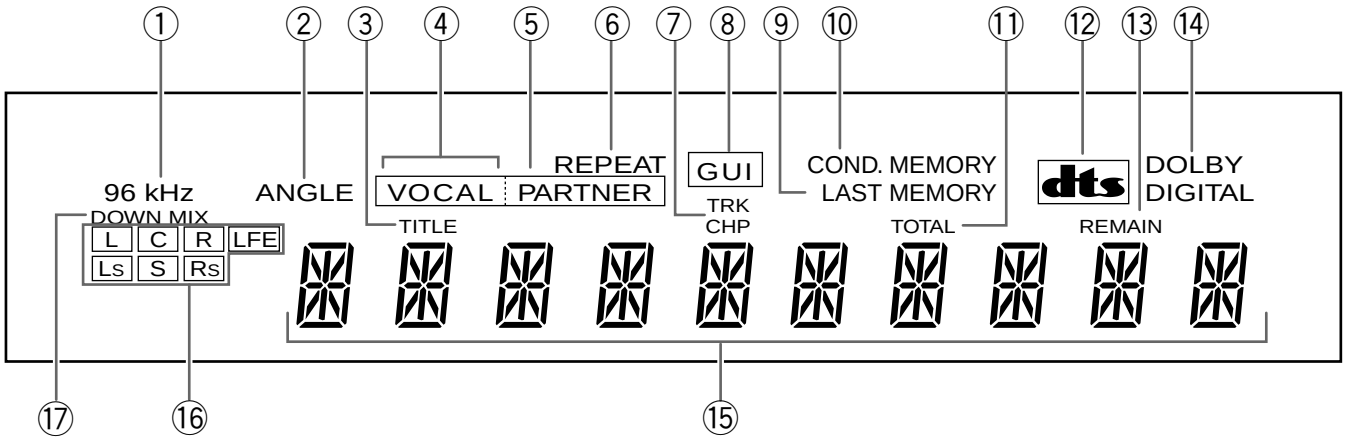
⑭ **Program Format indicator**
Depending on the audio format recorded on the disc loaded in the player, the following indicators light to show the channels being played back.
L : Left front*1*2, **C** : Center*1, **R** : Right front*1*2,
LS : Left surround*1, **S** : Surround (mono)*2,
RS : Right surround*1
*1: Lights to indicate playback of a 5.1 ch Dolby Digital source.
*2: Lights to indicate playback of a Dolby Surround source.

The LFE (low frequency effects) channel indicator indicates 5.1 channel audio that contains a channel for low frequency sounds that are used by the sub woofer.

Note
During playback of Dolby Digital karaoke DVDs, the Program Format indicators do not light.

⑮ **DOWNMIX indicator**
During multichannel audio playback, indicates that the output signal has been “downmixed” from the original audio source. This is an automatic function performed by the player in order to present the most appropriate audio mix to the speakers present in your system.

■ DV-K302CD



① **96 kHz indicator**
Indicates play of a disc outputting an audio signal with a sampling frequency of 96 kHz.

② **ANGLE indicator**
Indicates Multi-Angle playback is in progress.

③ **TITLE indicator**
Indicates a title number is being displayed.

④ **VOCAL indicator**
Indicates that the Vocal function is on.

⑤ **VOCAL PARTNER indicator**
Indicates that the Vocal Partner function is on.

⑥ **REPEAT indicator**
Indicates that the Repeat function is on.

⑦ **TRK and CHP indicator**
Indicates a chapter or track number is being displayed.

⑧ **GUI indicator**
Lights when the Karaoke or Setup on-screen menus are being displayed.

⑨ **LAST MEMORY indicator**
Indicates the Last Memory location is recorded in memory for the currently loaded DVD or Video CD.

⑩ **COND. MEMORY indicator**
Indicates that Condition Memory settings are memorized for the currently loaded DVD.

⑪ **TOTAL indicator**
Indicates that the disc in the player is stopped and **DISPLAY** has been pressed.

⑫ **DTS indicator**
Indicates DVD DTS audio playback.

⑬ **REMAIN indicator**
Indicates that the remaining playback time of a title or chapter/ track is being displayed.

⑭ **DOLBY DIGITAL indicator**
Indicates Dolby Digital audio playback on DVDs.

⑮ **Counter display**
Displays the playback mode, type of disc, title and chapter/ track numbers, playback time, etc.

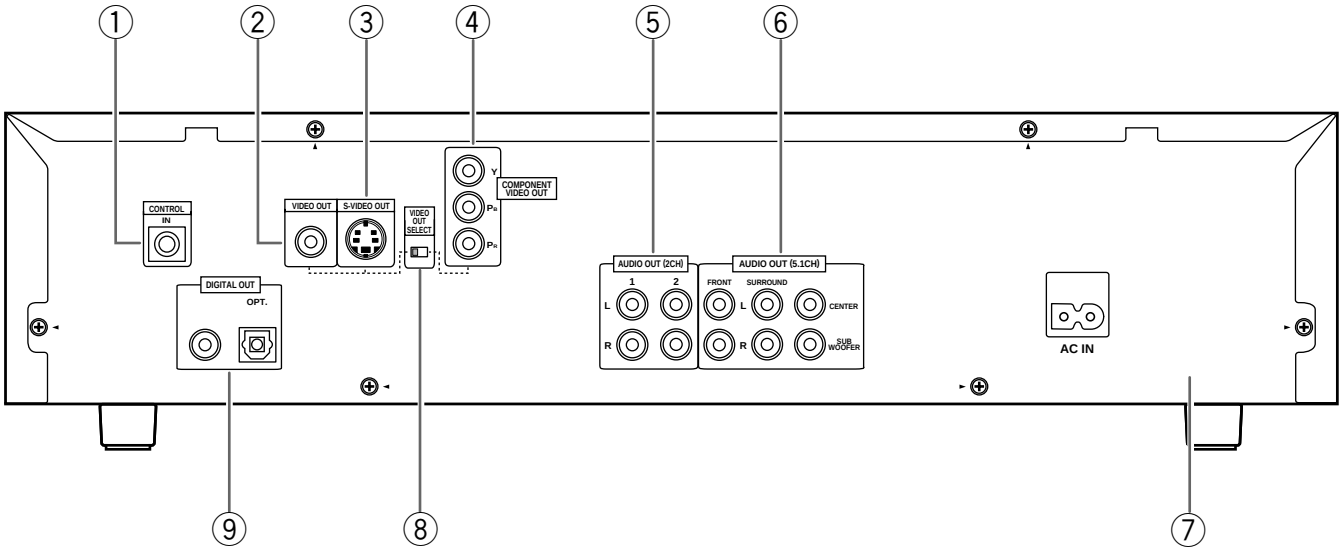
⑯ **Program Format indicators**
During Dolby Digital playback depending on the audio format recorded on the disc loaded in the player, the following indicators light to show the channels being played back.
L: Left front*1*2, **C**: Center*1, **R**: Right front*1*2,
LS: Left surround*1, **S**: Surround (mono)*2,
RS: Right surround*1
LFE: Low frequency effects*1,
*1: Lights to indicate playback of a 5.1 ch Dolby Digital source.
*2: Lights to indicate playback of a Dolby Surround source.
The LFE (low frequency effects) channel indicator indicates 5.1 channel audio that contains a channel for low frequency sounds that are used by the sub woofer.

Note
During playback of Dolby Digital multiplex compatible DVD karaoke discs, the Program Format indicators do not light.

⑰ **DOWNMIX indicator**
During multichannel audio playback, indicates that the out put signal has been “downmixed” from the original audio source. This is an automatic function performed by the player in order to present the most appropriate audio mix to the speakers present in your system.

8.1.3 Rear Panel Section

■ DV-C302D



① **CONTROL IN jack**

Use to connect this player to another component bearing the Pioneer mark. This lets you control this unit as though it were a component in a system. Player operations are then performed by pointing the remote control at the component that the player is connected to.

② **VIDEO OUT jack**

Connect to the video input on a TV or monitor or AV amplifier or receiver with video input capability. When using this jack, be sure to set VIDEO OUT SELECT to the left position.

③ **S-VIDEO OUT jack**

If your TV or monitor has an S-video input, clear picture reproduction is possible by connecting the player to your TV or monitor via the S-video jack. When using this jack, be sure to set VIDEO OUT SELECT to the left position.

④ **COMPONENT VIDEO OUT jacks**

If your projection monitor, projector or similar component has component video inputs, you can produce a higher quality picture on your projection monitor or projector by connecting to the component video outputs on this unit. When using these jacks, be sure to set VIDEO OUT SELECT to the right position.

⑤ **AUDIO OUT (2 CH) jacks**

Use to output two-channel audio (analog) to the audio stereo inputs on a TV or stereo amplifier. If you are connecting to a receiver that has both digital and analog input jacks for DVD player connection, it may be beneficial to make both connections.

⑥ **AUDIO OUT (5.1 CH) jacks**

Use to output 6 discrete audio channels of decoded digital audio to a receiver or amplifier with discrete audio inputs.

⑦ **AC IN power cord connection terminal**

Use to connect the power cord to the wall outlet .

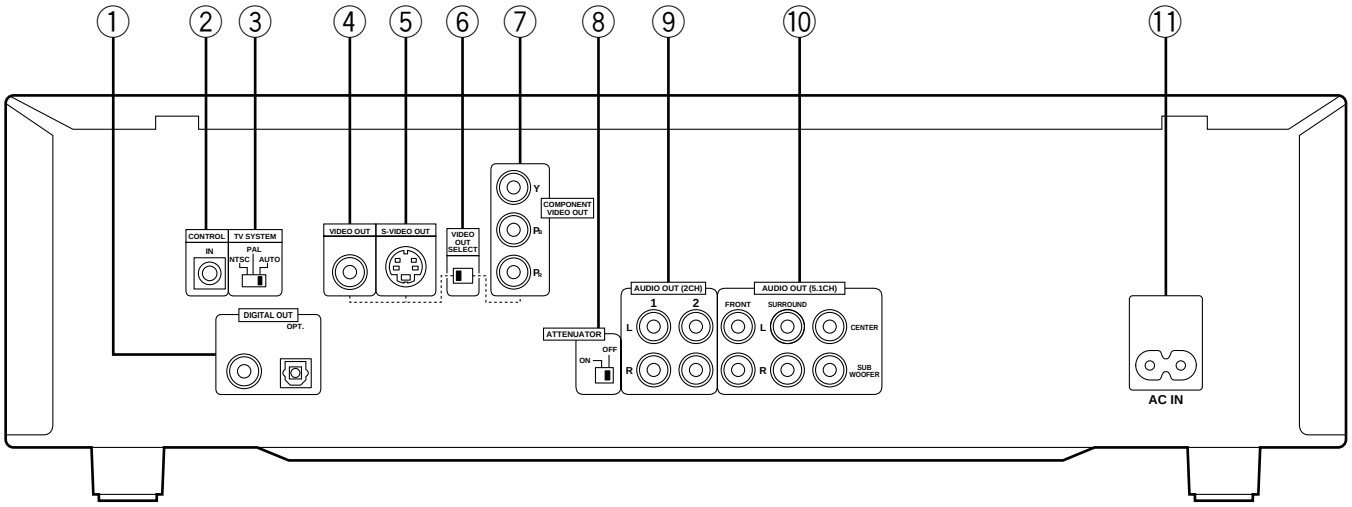
⑧ **VIDEO OUT SELECT switch**

Use to set which output is used to output the video signals. Select either video/S-video or component video signal output depending on the connections you make.

⑨ **DIGITAL OUT jacks (coaxial, optical (OPT.))**

Use to output the digital audio signal recorded on discs. You can output the digital signal via either coaxial or optical output jack to an AV amplifier or receiver.

■ DV-K302CD



① **DIGITAL OUT jacks (coaxial, optical (OPT.))**

Use to output the digital audio signal recorded on discs. You can output the digital signal via either coaxial or optical output jack to an AV amplifier or receiver.

② **CONTROL IN jack**

Use to connect this player to another component bearing the Pioneer SR mark. This lets you control this unit as though it were a component in a system. Player operations are then performed by pointing the remote control at the component that the player is connected to.

③ **TV SYSTEM switch**

Use to change the TV signal mode to either PAL or NTSC according to the type of TV and disc to be used. When the switch is in the AUTO position, the player outputs the format on the disc as is.

④ **VIDEO OUT jack**

Connect to the video input on a TV or monitor or AV amplifier or receiver with video input capability.
When using this jack, be sure to set VIDEO OUT SELECT to the left position.

⑤ **S-VIDEO OUT jack**

If your TV or monitor has an S-video input, clear picture reproduction is possible by connecting the player to your TV or monitor via the S-video jack.
When using this jack, be sure to set VIDEO OUT SELECT to the left position.

⑥ **VIDEO OUT SELECT switch**

Use to set which output is used to output the video signals. Select either video/S-video or component video signal output depending on the connections you make.

⑦ **COMPONENT VIDEO OUT jacks**

If your projection monitor, projector or similar component has component video inputs, you can produce a higher quality picture on your projection monitor or projector by connecting to the component video outputs on this unit. When using these jacks, be sure to set VIDEO OUT SELECT to the right position.

⑧ **ATTENUATOR switch**

Usually set to OFF. Switch it ON if the sound is distorted when enjoying Karaoke.

⑨ **AUDIO OUT (2 CH) jacks**

Use to output two-channel audio (analog) to the audio stereo inputs on a TV or stereo amplifier. If you are connecting to a receiver that has both digital and analog input jacks for DVD player connection, it may be beneficial to make both connections.

⑩ **AUDIO OUT (5.1 CH) jacks**

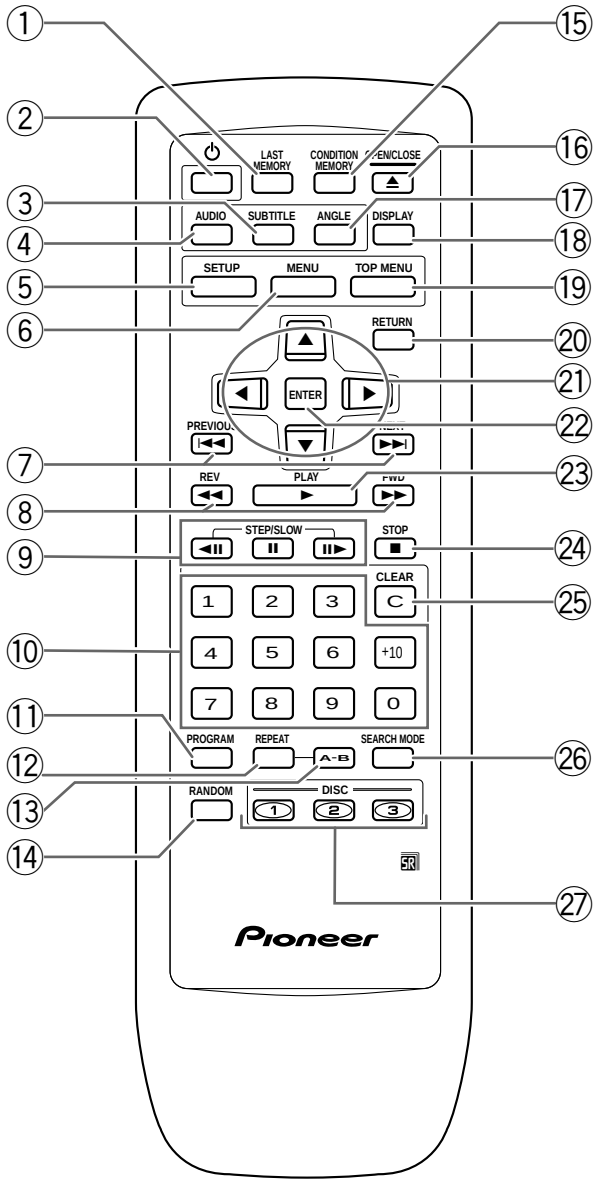
Use to output 6 discrete audio channels of decoded digital audio to a receiver or amplifier with discrete audio inputs.

⑪ **AC IN power cord connection terminal**

Use to connect the power cord to the wall outlet.

8.1.4 Remote Control Unit

■ DV-C302D



(Buttons indicated with * are used for menu operation.)

① **LAST MEMORY button**

You can resume DVD or Video CD playback from the point you last watched even if the disc is removed from the player. Press **LAST MEMORY** during playback to set a Last Memory point. When you want to resume playback of that disc, press **LAST MEMORY** in the stop mode and playback starts from the memorized point. Last Memory locations can be stored for up to 5 DVDs (or 4 DVDs and 1 Video CD).

② **⏻ (standby/on) button**

Press to switch the player on or to put in standby.

③ **SUBTITLE button**

Press repeatedly to select one of the subtitle languages programmed on a DVD or to turn the subtitles off.

④ **AUDIO button**

Press repeatedly to select one of the audio languages and/or audio formats programmed on a DVD.

For Video CD and CD, each press changes the audio output as follows.

Stereo → 1/L (Left) → 2/R (Right)

⑤ **SETUP button***

Press when the player is in either play or stop mode to open and close the Setup screen.

⑥ **MENU button***

Use to display or close the DVD menu screen.

⑦ **PREVIOUS ⏮/NEXT ⏭ buttons**

During playback, press **PREVIOUS ⏮** to go back to a previous chapter/track and **NEXT ⏭** to advance to the next chapter/track.

⑧ **REV ◄◄/FWD ►► (fast reverse/forward) buttons**

During playback of DVD and Video CD, press **FWD ►►** to perform fast forward scanning. Press **REV ◄◄** to perform fast reverse scanning of DVD and Video CD. When a CD is loaded, audio scanning is performed.

⑨ **STEP/SLOW ◄II/II/II► buttons**

Press **II** during playback to pause playback of disc. Press again to resume playback.

Press **STEP/SLOW II►** during playback to view slow playback. In pause mode, press **STEP/SLOW II►** to advance DVDs and Video CDs frame by frame and **STEP/SLOW ◄II** to back up a few frames at a time.

⑩ **Number buttons (1-9, 0, +10)***
Use to perform direct title and chapter/track searches, and to input numerical values.

⑪ **PROGRAM button**
You can program discs, titles, chapters or tracks to play back in a desired order. Programs can be a maximum of 24 steps.

⑫ **REPEAT button**
During playback of a DVD, press once to repeat playback of the current chapter, and twice to repeat playback of the current title. During playback of a Video CD or CD, press once to repeat playback of the current track, twice to repeat playback of the current disc, and 3 times to repeat all the discs loaded in the player.

⑬ **A-B button**
Press at the beginning and end of the section you want to repeat or to mark a location you want to return to.

⑭ **RANDOM button**
Press to play discs, titles, chapters or tracks in random order.

⑮ **CONDITION MEMORY button**
You can store in memory the settings for up to 15 DVDs. Press **CONDITION MEMORY** during DVD playback to memorize the settings.

⑯ **OPEN/CLOSE ⏏ button**
Press to open or close the disc tray.

⑰ **ANGLE button**
Some DVDs are recorded with various camera angle playback options. Press **ANGLE** repeatedly to display different camera angles.

⑱ **DISPLAY button**
Press during playback to display statistical disc information. Press repeatedly to display different information.

⑲ **TOP MENU button***
Press to call up the top menu programmed on the DVD. Depending on the DVD, the top menu may be identical to the DVD menu.

⑳ **RETURN button***
Use to go one menu back (current settings are maintained). Use **RETURN** when you do not want to change the option setting in a menu.

㉑ **Cursor buttons (◄/►/▲/▼)***
Use to move through the options on menu screens and to change settings.

㉒ **ENTER button***
Use to implement settings selected with the cursor buttons or to set items highlighted in a menu.

㉓ **PLAY ► button**
Press to start disc playback.

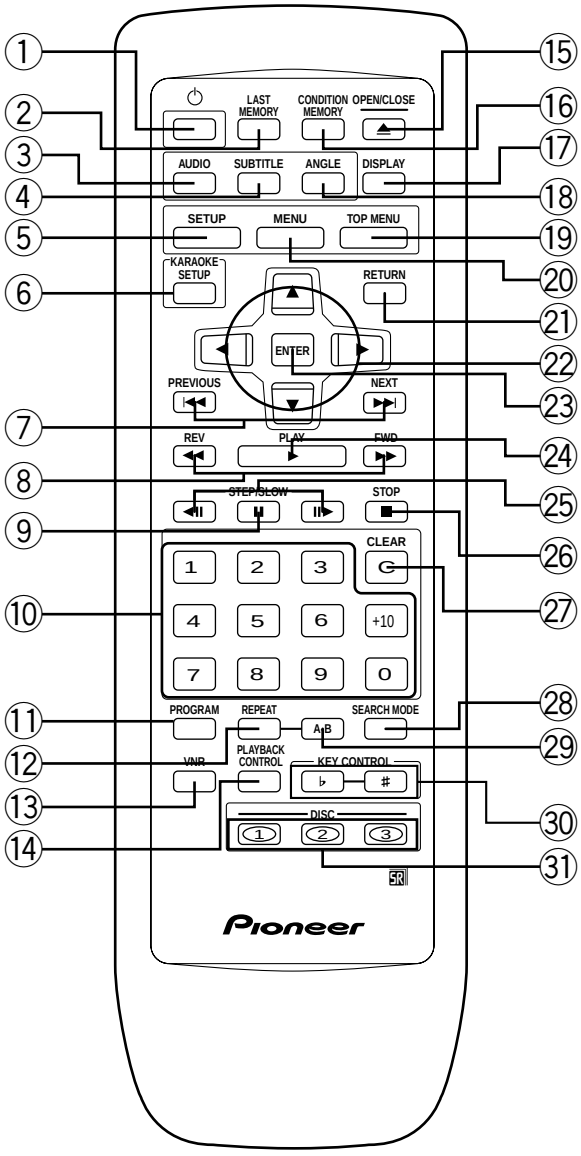
㉔ **STOP ■ button**
Press to stop playback. Pressing once enables playback to resume from a point shortly before the location where it was stopped. Pressing twice causes the disc to return to the beginning of the disc when playback starts again.

㉕ **CLEAR button**
Works in conjunction with a number of player functions. Use to cancel repeat and random playback, and to edit programs.

㉖ **SEARCH MODE button**
Press to perform a title, chapter/track or elapsed time search.

㉗ **DISC buttons (1-3)**
Use to select discs in the player directly.

■ DV-K302CD



(Buttons indicated with * are used for menu operation.)

① **⏻ (standby/on) button**

Press to switch the player on or to put in standby.

② **LAST MEMORY button**

You can resume DVD or Video CD playback from the point you last watched even if the disc is removed from the player. Press **LAST MEMORY** during playback to set a Last Memory point. When you want to resume playback of that disc, press **LAST MEMORY** in the stop mode and playback starts from the memorized point. Last Memory locations can be stored for up to 5 DVDs and 1 Video CD.

③ **AUDIO button**

Press repeatedly to select one of the audio languages and/or audio formats programmed on a DVD.

For Video CD and CD in Normal mode, each press changes the audio output as follows.

Stereo → 1/L (Left) → 2/R (Right)

For Super VCD, each press changes the audio output as follows.

•Normal mode

1 Stereo → 1L → 1R
2R ← 2L ← 2 Stereo

•Karaoke mode

1 ⟷ 2

④ **SUBTITLE button**

Press repeatedly to select one of the subtitle languages programmed on a DVD or to turn the subtitles off.

⑤ **SETUP button***

Press when the player is in either play or stop mode to open and close the Setup screen.

⑥ **KARAOKE SETUP button***

Press to open or close the Karaoke Setup screen.

⑦ **PREVIOUS ⏮/NEXT ⏭ buttons**

During playback, press **PREVIOUS ⏮** to go back to a previous chapter/track and **NEXT ⏭** to advance to the next chapter/track.

⑧ **REV ◄◄/FWD ►► (fast reverse/forward) buttons**

During playback of DVD, Super VCD and Video CD, press **FWD ►►** to perform fast forward scanning. Press **REV ◄◄** to perform fast reverse scanning of DVD, Super VCD and Video CD. When a CD is loaded, audio scanning is performed.

⑨ **II (pause) button**
Press to pause playback of a disc. Press again to resume playback.

⑩ **Number buttons (1-9, 0, +10)***
Use to perform direct title and chapter/track searches, and to input numerical values.

⑪ **PROGRAM button**
You can use this button to program up to 24 subsequent tracks while you are singing.

⑫ **REPEAT button**
Press to repeat playback .

⑬ **VNR button**
Press to turn on the video noise reduction function.

⑭ **PLAYBACK CONTROL button**
Use to switch the playback control for the Super VCD/Video CD on or off.

⑮ **OPEN/CLOSE ⏏ button**
Press to open or close the disc tray.

⑯ **CONDITION MEMORY button**
You can store in memory the settings for up to 15 DVDs. Press **CONDITION MEMORY** during DVD playback to memorize the settings.

⑰ **DISPLAY button**
Press during playback to display statistical disc information. Press repeatedly to display different information.

⑱ **ANGLE button**
Some DVDs are recorded with various camera angle playback options. Press **ANGLE** repeatedly to display different camera angles.

⑲ **TOP MENU button***
Press to call up the top menu programmed on the DVD. Depending on the DVD, the top menu may be identical to the DVD menu.

⑳ **MENU button***
Use to display or close the DVD menu screen.

㉑ **RETURN button***
Use to go one menu back (current settings are maintained). Use **RETURN** when you do not want to change the option setting in a menu.

㉒ **Cursor buttons (◄/►/▲/▼)***
Use to move through the options on menu screens and to change settings.

㉓ **ENTER button***
Use to implement settings selected with the cursor buttons or to set items highlighted in a menu.

㉔ **PLAY ► button**
Press to start disc playback.

㉕ **STEP/SLOW ◄II/II► buttons**
Press **STEP/SLOW II►** during playback to view slow playback. In pause mode, press **STEP/SLOW II►** to advance DVDs and Super VCDs/Video CDs frame by frame and **STEP/SLOW ◄II** to back up a few frames at a time. Reverse STEP/SLOW is not possible with a Super VCD/Video CD.

㉖ **STOP ■ button**
Press to stop playback. In Normal mode, pressing once enables playback to resume from a point shortly before the location where it was stopped. Pressing twice causes the disc to return to the beginning of the disc when playback starts again.

㉗ **CLEAR button**
Works in conjunction with a number of player functions. Use to cancel repeat.

㉘ **SEARCH MODE button**
Press to perform a title, chapter/track or time search.

㉙ **A-B button**
Press at the beginning and end of the section you want to repeat or to mark a location you want to return to.

㉚ **KEY CONTROL buttons**
Use to adjust the levels of the key in 11 steps.

㉛ **DISC buttons (1-3)**
Use to select discs in the player directly .

8.2 SPECIFICATIONS

■ DV-C302D

General

System ..... DVD system, Video CD system and Compact Disc digital audio system
Power requirements ..... AC 120 V, 60 Hz
Power consumption ..... 14 W
Power consumption in standby mode ..... 0.7 W
Weight ..... 4.5 kg (9 lb 9 oz)
Dimensions ..... 420 (W) x 376 (D) x 128 (H) mm ($16\ ^{9}/_{16}$ (W) x $14\ ^{13}/_{16}$ (D) x $5\ ^{1}/_{16}$ (H) in.) (Not including protruding cables, etc.)
Operating temperature ..... +5°C to +35°C (+36°F to +96°F)
Operating humidity ..... 5% to 85% (no condensation)

S-Video output

Y (luminance) - Output level ..... 1 Vp-p (75 Ω)
C (color) - Output level ..... 286 mVp-p (75 Ω)
Jack ..... S-VIDEO jack

Video output

Output level ..... 1 Vp-p (75 Ω)
Jack ..... RCA jack

Component video output

(Y, P_B, P_R)
Output level ..... Y: 1.0 Vp-p (75 Ω) P_B, P_R: 0.7 Vp-p (75 Ω)
Jacks ..... RCA jacks

Audio output (2 CH)

Output level
During audio output ..... 200 mVrms (1 kHz, –20 dB)
Number of channels 2
Jacks ..... RCA jacks

Audio output (5.1 CH)

Output level
During audio output ..... 200 mVrms (1 kHz, –20 dB)
Number of channels 6
Jacks ..... RCA jacks

Digital audio characteristics

Frequency response ..... 4 Hz to 44 kHz (DVD fs: 96 kHz)
S/N ratio ..... 115 dB
Dynamic range ..... 103 dB
Total harmonic distortion 0.002%
Wow and flutter ..... Limit of measurement (±0.001% W. PEAK) or lower

Digital output

Optical digital output ..... Optical digital jack
Coaxial digital output ..... RCA jack

Other terminals

CONTROL IN ..... Minijack (3.5 ø)

Accessories

Remote control unit 1
AA (R6P) dry cell batteries 2
Audio cord 1
Video cord 1
Power cord 1
Operating Instructions 1

Note

The specifications and design of this product are subject to change without notice, due to improvement.

■ DV-K302CD

General

System ..... DVD system, Video CD system and Compact Disc digital audio system
Power requirements ..... AC 110-127/220-240 V, 50/60 Hz
Power consumption ..... 15 W
Power consumption in standby mode ..... 0.9 W
Weight ..... 4.5 kg (9 lb 9 oz)
Dimensions ..... 420 (W) x 376 (D) x 128 (H) mm ($16\ ^{9}/_{16}$ (W) x $14\ ^{13}/_{16}$ (D) x $5\ ^{1}/_{16}$ (H) in.) (Not including protruding cables, etc.)
Operating temperature ..... +5°C to +35°C (+36°F to +96°F)
Operating humidity ..... 5% to 85% (no condensation)

S-Video output

Y (luminance) - Output level ..... 1 Vp-p (75 Ω)
C (color) - Output level ..... 286 mVp-p (75 Ω)
Jack ..... S-VIDEO jack

Video output

Output level ..... 1 Vp-p (75 Ω)
Jack ..... RCA jack

Component video output

(Y, P_B, P_R)
Output level ..... Y: 1.0 Vp-p (75 Ω) P_B, P_R: 0.7 Vp-p (75 Ω)
Jacks ..... RCA jacks

Audio output (2 CH)

Output level ..... 200 mVrms (1 kHz, –20 dB)
Number of channels 2
Jacks ..... RCA jacks

Audio output (5.1 CH)

Output level ..... 200 mVrms (1 kHz, –20 dB)
Number of channels 6
Jacks ..... RCA jacks

Digital audio characteristics

Frequency response ..... 4 Hz to 44 kHz (DVD fs: 96 kHz)
S/N ratio ..... 115 dB
Dynamic range ..... 103 dB
Total harmonic distortion 0.002%
Wow and flutter ..... Limit of measurement (±0.001% W. PEAK) or lower

Digital output

Optical digital output ..... Optical digital jack
Coaxial digital output ..... RCA jack

Other terminals

CONTROL IN ..... Minijack (3.5 ø)

Accessories

Remote control unit 1
AA (R6P) dry cell batteries 2
Audio cord 1
Video cord 1
Power cord 1
Operating Instructions 1

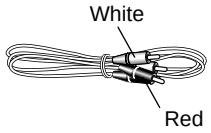
Note

The specifications and design of this product are subject to change without notice, due to improvement.

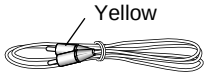
■ Accessories

● For DV-C302D

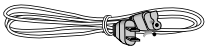
Audio Cord (L=1.5m): VDE1033



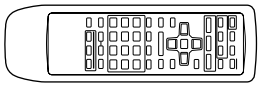
Video Cord (L=1.5m): VDE1034



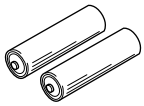
Power Cord: ADG7021



Remote Control Unit (CU-DV051): VXX2647

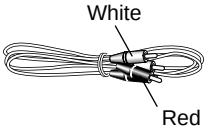


Dry Cell Battery (R6P,AA): VEM-013

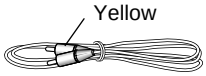


● For DV-K302CD

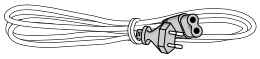
Audio Cord (L=1.5m)
VDE1054: RAM type
VDE1033: RD/RA, RL, RL/RD types



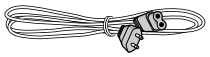
Video Cord (L=1.5m)
VDE1055: RAM type
VDE1034: RD/RA, RL, RL/RD types



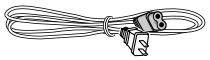
Power Cord : ADG7018 (RAM type)



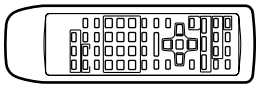
Power Cord : ADG1127 (RL, RL/RD types)



Power Cord : ADG7003 (RD/RA type)



Remote Control Unit (CU-DV052): VXX2646



Dry Cell Battery (R6P,AA)
VEM1010: RAM type
VEM-013: RD/RA, RL. RL/RD types